



Honeywell Technology Solutions Inc.

Goddard Corporate Park

Lanham, Maryland 20706-2291

TRACKING DATA EVALUATION REPORT FOR STS-119 and ISS

Daily Period: Mar 16 at 223901 GMT through Mar 17 at 224051 GMT
Mission Period: Mar 14 at 000000 GMT through Mar 17 at 224051 GMT

1. EXECUTIVE SUMMARY

This report summarizes all GN and SN tracking data for ISS and STS (except for ISS one-way Doppler data) since the beginning of mission support for STS-119. The executive summary of this report provides a daily overview of the number of passes received for ISS and STS as well as a daily summary of significant tracking data anomalies. The remainder of this report provides a detailed cumulative mission summary of all GN and SN tracking data for ISS and STS.

The C-band tracking support for ISS started on March 14, 2009. STS-119 was launched on March 15, 2009 at 234344 GMT. STS-119 docked with ISS on March 17 at 212000 GMT.

Twelve ISS C-band passes from ANTQ, ASCQ, EAFF, FRCF, and WL2F were received during the daily reporting period. All of the ISS C-band passes during the daily reporting period had nominal angle and range tracking data.

Ten STS C-band passes from ANTQ, EAFF, FRCF, WL2F, and WLPQ were received during the daily reporting period. All of the STS C-band passes during the daily reporting period had nominal angle and range tracking data.

Six 2-way ISS SN passes using TDRS-6 and TDRS-10 were received during the daily reporting period. All of the 2-way ISS SN passes during the daily reporting period had nominal range and Doppler tracking data.

Five 1-way STS S-band passes from AGO3 and MIL3 were received during the daily reporting period. All of the 1-way STS S-band passes during the daily reporting period had nominal angle tracking data.

The cumulative mission percentages of anomalous SN TDRS-3, TDRS-4, TDRS-5, TDRS-6, and TDRS-10 tracking data for STS-119 are 2.4, 3.0, 2.2, 0.8, and 0.0 respectively. The anomalous SN tracking data has consisted of various Doppler drifts, biases, and/or spikes.

No significant tracking data problems were noted for ISS or STS-119 during the daily reporting period.

2. INTRODUCTION

This memorandum, which is produced by the Metric Tracking Data Evaluation (MTDE) Task located within the Flight Dynamics Facility (FDF) at Goddard Space Flight Center (GSFC), provides a Ground Network (GN) and Space Network (SN) tracking data evaluation report for the Space Transportation System (STS) and for the International Space Station (ISS). This report includes information about data processing, network validation, and network calibration for STS and ISS missions.

3. DATA PROCESSING

The metric tracking data evaluated for this report was processed using the Goddard Trajectory Determination System (GTDS), which is the primary orbit determination system used by the FDF. This system produces Observed minus Computed (O-C) values by comparing actual tracker measurements with computed measurements derived from weighted least-squares orbital solutions. Orbital solutions for ISS are derived by using 24 hours of C-band range tracking data as well as SN two-way range and Doppler tracking data if available. Orbital solutions for STS are derived by using one revolution (approximately 96 minutes) of SN two-way Doppler tracking data, GN S-band range and two-way range-rate tracking data, and C-band range tracking data.

4. NETWORK VALIDATION

The validation of metric tracking data is the process of determining the quality of tracking data measurements received from the trackers. The output from the GTDS orbital solutions is evaluated to assess the accuracy and usefulness of the tracking data. The O-C values (also known as residuals) and the amount of data edited from the orbital solutions (a 3-sigma edit criterion is normally used) are statistically analyzed to identify data anomalies and to assess the overall network tracking performance. Tracking data anomalies are identified and noted in this report. Anomalous tracking data as well as tracking data that is flagged invalid by the tracker is generally not used for orbit determination.

5. NETWORK CALIBRATION

The calibration of metric tracking data is the process of using statistical evaluation techniques to determine tracker and network performance. Anomalous tracking data as well as tracking data that is flagged invalid by the tracker is generally not used for network calibration. Calibration parameters for each tracker, which are computed from the GTDS calibration O-C statistics for each pass, are defined as follows:

Tracker Mean: A weighted sample mean of pass O-C means. The tracker mean is an estimate of the bias in the measurements.

Deviation: A weighted 2-sigma sample standard deviation (SD) of pass O-C means about the tracker mean. A Student's t correction for small sample size is applied when necessary. If there are fewer than four passes for a tracker, the deviation is not computed. The deviation is a measure of the bias consistency.

Average Pass SD: A weighted Root Mean Square (rms) of pass O-C standard deviations. This parameter provides an upper limit for the average pass system noise.

Root Sum Square: The Root Sum Square (rss) of the tracker mean, half the deviation, and the average pass SD. This parameter is an estimate of the average measurement error. The rss is not computed if there are fewer than four passes for a tracker.

All of these statistical parameters are weighted by the number of points in each pass.

6. GN TRACKING DATA EVALUATION CRITERIA

GN S-band tracking data for STS is comprised of x-angle, y-angle, range and range-rate tracking data. GN C-band tracking data for STS and ISS is comprised of azimuth angle, elevation angle, and range tracking data.

S-band and C-band GN tracking data taken below 7° in elevation is not used for orbit determination or for network calibration. Poor quality x-angle or azimuth angle tracking data taken in antenna keyhole regions (where the absolute value of the y-angle is greater than or equal to 70° for X-Y antennas or the absolute value of the elevation angle is greater than or equal to 70° for Az-EI antennas) is not considered anomalous. Tracking data received during periods of antenna masking is excluded from the tracker calibration statistics and is not considered anomalous.

S-band GN angle tracking data is generally considered to be anomalous if more than 20 percent of the data flagged valid has residuals greater than or equal to 0.05°. C-band GN angle tracking data is generally considered to be anomalous if more than 20 percent of the angle data flagged valid has residuals greater than or equal to 0.10°. S-band GN range tracking data is generally considered to be anomalous if more than 20 percent of the data flagged valid has residuals greater than or equal to 20 meters. C-band GN range tracking data is generally considered to be anomalous if more than 20 percent of the data flagged valid has residuals greater than or equal to 50 meters. S-band 2-way GN range-rate tracking data is generally considered to be anomalous if more than 20 percent of the data flagged valid has residuals greater than or equal to greater than 0.5 meters per second.

Occasionally a C-band tracker will track the wrong target vehicle when STS and ISS are in very close proximity to each other. This pass will be identified in the FDF reports with the name of the intended target vehicle. If no usable tracking data is received from the intended target vehicle, then this pass will be identified as an anomalous pass.

7. SN TRACKING DATA EVALUATION CRITERIA

SN tracking data for ISS is comprised of one-way S-band and K-band Doppler tracking data. Only the one-way S-band Doppler tracking data is used in the orbit determination process for ISS. The ISS one-way S-band Doppler tracking data residuals, which measure the offset from the nominal frequency of the ISS transponder, are generally considered nominal as long as the residuals are less than 700 Hertz. Reports are generated by the FDF on a weekly and monthly basis that summarize the frequency offset for the ISS transponders. If the frequency offset exceeds 700 Hertz, FDF personnel will issue a report recommending an adjustment to the forward and transmit frequencies for ISS.

If 2-way SN tracking of ISS is available, then the FDF will use the coherent range and Doppler tracking data as well as C-band tracking data for orbit determination purposes.

SN tracking data for STS is comprised of two-way S-band Doppler tracking data. The Doppler tracking data for STS is used for determining the quality of the tracking service. Each Doppler tracking data observation is evaluated and categorized as usable, as anomalous, or as invalid. An invalid observation is one that has been flagged as invalid in the tracking data message (TDM) at White Sands Complex (WSC). Each tracking data event is rated as a success or as a failure. A success is a tracking data event that has at least 70 percent usable Doppler tracking data. A failure is an event that has less than 70 percent usable Doppler data.

8. GN TRACKING DATA PASSES

The following table lists the number of daily and mission S-band and C-band passes received from each tracker for both ISS and STS having a maximum elevation of at least 7°. Only passes with a maximum elevation of at least 7° are used by the FDF for orbit determination and anomaly reporting. The number of passes listed in this table may not agree with the actual number of passes scheduled.

Tracker	ISS		STS-119	
	Daily	Mission	Daily	Mission
AGO3	0	0	2	3
ANTQ	1	3	1	1
ASCQ	3	6	0	1
EAFF	2	6	1	1
FRCF	2	7	2	5
KMRF	0	0	1	1
MIL3	0	0	3	5
WL2F	4	10	3	3
WLPQ	0	5	2	5
TOTALS	12	37	15	25

9. GN TRACKING DATA ANOMALIES

The following table contains a chronological listing of all GN tracking data anomalies for both ISS and STS for the entire mission. Tracking data anomalies are only reported for passes having a maximum elevation above 7°. Tracking data in the keyhole region or tracking data affected by station masking is not considered anomalous.

Start	Stop	Tracker	Satellite	Comments

10. GN STATISTICS

The following report provides GN tracking data residual statistics for both ISS and STS. Statistics, consisting of mean, standard deviation and number of points, are computed for each pass for angle, range, and range-rate tracking data residuals. The statistics are summarized for each tracking station for each satellite. The statistics are computed for two different time intervals. The first time interval corresponds to the tracking data summarized on a daily basis. The second time interval corresponds to the tracking data summarized for the entire mission. Group statistics, consisting of mean, deviation, average pass standard deviation, and rss, are also computed for each tracker for both ISS and STS.

FLIGHT DYNAMICS FACILITY GN STATISTICS PROGRAM

20090316/223901 = START TIME FOR STATISTICS INTERVAL 1
20090317/224051 = STOP TIME FOR STATISTICS INTERVAL 1

20090314/000000 = START TIME FOR STATISTICS INTERVAL 2
20090317/224051 = STOP TIME FOR STATISTICS INTERVAL 2

LO SPEED TRACKING DATA

N = INCLUDE TT&C DATA (Y/N)

SATELLITE(S)

ISS

STS-119

STATION(S)

ALL

STATISTICS INTERVAL 1

STATION = AGO3 SATELLITE = STS-119

ANGLE 1 RESIDUALS (DEG)				ANGLE 2 RESIDUALS (DEG)				RANGE RESIDUALS (M)				RANGE-RATE RESIDUALS (M/S)						
	MEAN	SD	PTS		MEAN	SD	PTS	%USE A	MEAN	SD	PTS	%USE A	MEAN	SD	PTS	%USE A M ANOMALY C		
20090317/170330	20090317/170950	0.066	0.011	8	100.0	-0.028	0.011	16	100.0	-----	-----	0	0.0	-----	-----	0	0.0	1
20090317/183600	20090317/185140	0.040	0.034	42	90.5	-0.017	0.010	42	100.0	-----	-----	0	0.0	-----	-----	0	0.0	1

STATION = AGO3 SATELLITE = STS-119

RESIDUALS								VDNA NOISE				RATING			
	MEAN	DEV	SD	RSS	PTS	PASSES		MIN	MAX	RMS	PASSES	TOTALPASSES	%USE	ANOMALY	
ANGLE 1 (DEG)	0.044	-----	0.032	-----	50	2		0.0057	0.0076	0.0064	2	2	92.0		
ANGLE 2 (DEG)	-0.020	-----	0.010	-----	58	2		0.0048	0.0056	0.0053	2	2	100.0		
RANGE (M)	-----	-----	-----	-----	0	0		-----	-----	-----	0	2	0.0		
RANGE-RATE (M/S)	-----	-----	-----	-----	0	0		-----	-----	-----	0	2	0.0		

STATION = AGO3 SATELLITE = STS-119 SUMMARY

STATION = AGO3 SATELLITE = STS-119		ANGLE 1 RESIDUALS (DEG)				ANGLE 2 RESIDUALS (DEG)				RANGE RESIDUALS (M)				RANGE-RATE RESIDUALS (M/S)			
		MEAN	SD	PTS	%USE A	MEAN	SD	PTS	%USE A	MEAN	SD	PTS	%USE A	MEAN	SD	PTS	%USE A M ANOMALY C
20090317/202342	20090317/203448	0.001	0.003	62	100.0	-0.008	0.004	62	100.0	-2.423	21.014	62	100.0	-----	-----	-----	0 0.0 0

STATION = AGO3 SATELLITE = STS-119		RESIDUALS				VDNA NOISE				RATING						
		MEAN	DEV	SD	RSS	PTS	PASSES	MIN	MAX	RMS	PASSES	TOTALPASSES	%USE	ANOMALY		
ANGLE 1 (DEG)		0.001	-----	0.003	-----	62	1	0.0012	0.0012	0.0012	1	1	100.0			
ANGLE 2 (DEG)		-0.008	-----	0.004	-----	62	1	0.0013	0.0013	0.0013	1	1	100.0			
RANGE (M)		-2.423	-----	21.014	-----	62	1	5.3426	5.3426	5.3426	1	1	100.0			
RANGE-RATE (M/S)		-----	-----	-----	-----	0	0	-----	-----	-----	0	1	0.0			

STATION = ANTQ SATELLITE = ISS SUMMARY

STATION = ANTQ SATELLITE = ISS		ANGLE 1 RESIDUALS (DEG)				ANGLE 2 RESIDUALS (DEG)				RANGE RESIDUALS (M)				RANGE-RATE RESIDUALS (M/S)			
		MEAN	SD	PTS	%USE A	MEAN	SD	PTS	%USE A	MEAN	SD	PTS	%USE A	MEAN	SD	PTS	%USE A M ANOMALY C
20090317/220012	20090317/220924	0.005	0.002	31	100.0	-0.001	0.008	31	100.0	4.080	6.238	31	100.0	-----	-----	-----	0 0.0 0

STATION = ANTQ SATELLITE = STS-119		RESIDUALS				VDNA NOISE				RATING						
		MEAN	DEV	SD	RSS	PTS	PASSES	MIN	MAX	RMS	PASSES	TOTALPASSES	%USE	ANOMALY		
ANGLE 1 (DEG)		0.005	-----	0.002	-----	31	1	0.0008	0.0008	0.0008	1	1	100.0			
ANGLE 2 (DEG)		-0.001	-----	0.008	-----	31	1	0.0040	0.0040	0.0040	1	1	100.0			
RANGE (M)		4.080	-----	6.238	-----	31	1	2.5367	2.5367	2.5367	1	1	100.0			
RANGE-RATE (M/S)		-----	-----	-----	-----	0	0	-----	-----	-----	0	1	0.0			

STATION = ANTQ SATELLITE = STS-119 SUMMARY

STATION = ASCQ SATELLITE = ISS		ANGLE 1 RESIDUALS (DEG)				ANGLE 2 RESIDUALS (DEG)				RANGE RESIDUALS (M)				RANGE-RATE RESIDUALS (M/S)			
		MEAN	SD	PTS	%USE A	MEAN	SD	PTS	%USE A	MEAN	SD	PTS	%USE A	MEAN	SD	PTS	%USE A M ANOMALY C
20090317/055206	20090317/060324	-0.000	0.002	64	100.0	0.007	0.005	64	100.0	6.270	15.406	64	100.0	-----	-----	-----	0 0.0 0

20090317/154006	20090317/155148	0.003	0.004	50	100.0	-0.003	0.007	50	100.0	6.611	17.052	50	98.0	-----	-----	0	0.0	0
20090317/171506	20090317/172606	-0.000	0.005	48	100.0	0.012	0.008	48	100.0	1.674	14.318	48	100.0	-----	-----	0	0.0	0

STATION = ASCQ SATELLITE = ISS		RESIDUALS				VDNA NOISE				RATING							
		MEAN	DEV	SD	RSS	PTS	PASSES	MIN	MAX	RMS	PASSES	TOTALPASSES	%USE	ANOMALY			
ANGLE 1 (DEG)		0.001	-----	0.004	-----	162	3	0.0007	0.0037	0.0027	3	3	3	100.0			
ANGLE 2 (DEG)		0.005	-----	0.007	-----	162	3	0.0022	0.0042	0.0032	3	3	3	100.0			
RANGE (M)		5.013	-----	15.628	-----	162	3	12.1923	15.5560	13.9298	3	3	3	99.4			
RANGE-RATE (M/S)		-----	-----	-----	-----	0	0	-----	-----	-----	0	3	3	0.0			

STATION = EAFF SATELLITE = ISS		SUMMARY																		
		ANGLE 1 RESIDUALS (DEG)				ANGLE 2 RESIDUALS (DEG)				RANGE RESIDUALS (M)				RANGE-RATE RESIDUALS (M/S)						
		MEAN	DEV	SD	PTS	%USE A	MEAN	DEV	SD	PTS	%USE A	MEAN	DEV	SD	PTS	%USE A	MEAN	SD	PTS	%USE A M ANOMALY C
20090317/021130	20090317/022330	-0.005	0.015	62	100.0		-0.003	0.008	68	100.0		0.889	16.182	68	98.5	-----	-----	0	0.0	0
20090317/083742	20090317/084842	-0.004	0.008	55	100.0		-0.004	0.009	55	100.0		12.229	24.073	55	90.9	-----	-----	0	0.0	0

STATION = EAFF SATELLITE = ISS		RESIDUALS				VDNA NOISE				RATING							
		MEAN	DEV	SD	RSS	PTS	PASSES	MIN	MAX	RMS	PASSES	TOTALPASSES	%USE	ANOMALY			
ANGLE 1 (DEG)		-0.005	-----	0.012	-----	117	2	0.0069	0.0069	0.0069	2	2	2	100.0			
ANGLE 2 (DEG)		-0.003	-----	0.008	-----	123	2	0.0049	0.0063	0.0056	2	2	2	100.0			
RANGE (M)		5.960	-----	20.090	-----	123	2	13.5034	18.0104	15.6503	2	2	2	95.1			
RANGE-RATE (M/S)		-----	-----	-----	-----	0	0	-----	-----	-----	0	2	2	0.0			

STATION = EAFF SATELLITE = ISS		SUMMARY																		
		ANGLE 1 RESIDUALS (DEG)				ANGLE 2 RESIDUALS (DEG)				RANGE RESIDUALS (M)				RANGE-RATE RESIDUALS (M/S)						
		MEAN	DEV	SD	PTS	%USE A	MEAN	DEV	SD	PTS	%USE A	MEAN	DEV	SD	PTS	%USE A	MEAN	SD	PTS	%USE A M ANOMALY C
20090317/102300	20090317/103212	0.002	0.008	41	100.0		0.000	0.010	41	100.0		4.919	8.572	41	100.0	-----	-----	0	0.0	0

STATION = EAFF SATELLITE = STS-119		RESIDUALS				VDNA NOISE				RATING							
		MEAN	DEV	SD	RSS	PTS	PASSES	MIN	MAX	RMS	PASSES	TOTALPASSES	%USE	ANOMALY			
ANGLE 1 (DEG)		0.002	-----	0.008	-----	41	1	0.0060	0.0060	0.0060	1	1	1	100.0			
ANGLE 2 (DEG)		0.000	-----	0.010	-----	41	1	0.0064	0.0064	0.0064	1	1	1	100.0			

RANGE (M)	4.919	-----	8.572	-----	41	1	4.8630	4.8630	4.8630	1	1	100.0
RANGE-RATE (M/S)	-----	-----	-----	-----	0	0	-----	-----	-----	0	1	0.0

STATION = EAFF SATELLITE = STS-119 SUMMARY

STATION = FRCF SATELLITE = ISS	ANGLE 1 RESIDUALS (DEG)	ANGLE 2 RESIDUALS (DEG)	RANGE RESIDUALS (M)	RANGE-RATE RESIDUALS (M/S)
	MEAN SD PTS %USE A	MEAN SD PTS %USE A	MEAN SD PTS %USE A	MEAN SD PTS %USE A M ANOMALY C
20090317/034800 20090317/035818	-0.008 0.011 39 100.0	-0.016 0.016 39 100.0	11.056 23.055 39 97.4	----- ----- 0 0.0 0
20090317/101254 20090317/102424	0.001 0.007 63 100.0	0.002 0.010 63 100.0	-5.726 24.086 63 96.8	----- ----- 0 0.0 0

STATION = FRCF SATELLITE = ISS	RESIDUALS	VDNA NOISE	RATING
	MEAN DEV SD RSS PTS PASSES	MIN MAX RMS PASSES TOTALPASSES %USE	ANOMALY
ANGLE 1 (DEG)	-0.002 ----- 0.009 ----- 102 2	0.0048 0.0115 0.0081 2 2	100.0
ANGLE 2 (DEG)	-0.005 ----- 0.013 ----- 102 2	0.0084 0.0142 0.0110 2 2	100.0
RANGE (M)	0.691 ----- 23.700 ----- 102 2	16.2109 22.2800 18.7590 2 2	97.1
RANGE-RATE (M/S)	----- ----- ----- 0 0	----- ----- 0 2	0.0

STATION = FRCF SATELLITE = ISS SUMMARY

STATION = FRCF SATELLITE = STS-119	ANGLE 1 RESIDUALS (DEG)	ANGLE 2 RESIDUALS (DEG)	RANGE RESIDUALS (M)	RANGE-RATE RESIDUALS (M/S)
	MEAN SD PTS %USE A	MEAN SD PTS %USE A	MEAN SD PTS %USE A	MEAN SD PTS %USE A M ANOMALY C
20090317/023212 20090317/024254	-0.009 0.012 55 100.0	-0.006 0.018 55 100.0	5.542 11.876 55 100.0	----- ----- 0 0.0 0
20090317/084954 20090317/085912	-0.006 0.009 41 100.0	0.002 0.015 41 100.0	-4.942 10.719 41 100.0	----- ----- 0 0.0 0

STATION = FRCF SATELLITE = STS-119	RESIDUALS	VDNA NOISE	RATING
	MEAN DEV SD RSS PTS PASSES	MIN MAX RMS PASSES TOTALPASSES %USE	ANOMALY
ANGLE 1 (DEG)	-0.008 ----- 0.011 ----- 96 2	0.0032 0.0058 0.0046 2 2	100.0
ANGLE 2 (DEG)	-0.003 ----- 0.017 ----- 96 2	0.0073 0.0078 0.0076 2 2	100.0
RANGE (M)	1.064 ----- 11.398 ----- 96 2	3.5909 6.8032 5.8801 2 2	100.0
RANGE-RATE (M/S)	----- ----- ----- 0 0	----- ----- 0 2	0.0

STATION = FRCF SATELLITE = STS-119 SUMMARY

STATION = KMRF SATELLITE = STS-119

ANGLE 1 RESIDUALS (DEG)								ANGLE 2 RESIDUALS (DEG)								RANGE RESIDUALS (M)								RANGE-RATE RESIDUALS (M/S)							
	MEAN	SD	PTS	%USE A		MEAN	SD	PTS	%USE A		MEAN	SD	PTS	%USE A		MEAN	SD	PTS	%USE A		MEAN	SD	PTS	%USE A	M	ANOMALY C					
20090317/162712	20090317/163842	0.002	0.015	52	100.0	-0.022	0.039	52	96.2	-0.080	7.033	52	100.0	-	-	-	-	-	-	-	-	0	0.0	0							

STATION = KMRF SATELLITE = STS-119

RESIDUALS								VDNA NOISE								RATING																																			
MEAN	DEV	SD	RSS	PTS	PASSES	MIN	MAX	RMS	PASSES	TOTALPASSES	%USE	ANOMALY	MEAN	SD	PTS	%USE A	MEAN	SD	PTS	%USE A	MEAN	SD	PTS	%USE A	M	ANOMALY C																									
ANGLE 1 (DEG)	0.002	-----	0.015	-----	52	1	0.0118	0.0118	0.0118	1	1	100.0	ANGLE 2 (DEG)	-0.022	-----	0.039	-----	52	1	0.0195	0.0195	0.0195	1	1	96.2	RANGE (M)	-0.080	-----	7.033	-----	52	1	4.3301	4.3301	4.3301	1	1	100.0	RANGE-RATE (M/S)	-----	-----	-----	-----	0	0	-----	-----	0	1	0.0	0.0
RANGE (M)	-0.080	-----	7.033	-----	52	1	4.3301	4.3301	4.3301	1	1	100.0	RANGE-RATE (M/S)	-----	-----	-----	-----	0	0	-----	-----	0	1	0.0	0.0																										

STATION = KMRF SATELLITE = STS-119 SUMMARY

STATION = MIL3 SATELLITE = STS-119

ANGLE 1 RESIDUALS (DEG)								ANGLE 2 RESIDUALS (DEG)								RANGE RESIDUALS (M)								RANGE-RATE RESIDUALS (M/S)							
	MEAN	SD	PTS	%USE A		MEAN	SD	PTS	%USE A		MEAN	SD	PTS	%USE A		MEAN	SD	PTS	%USE A		MEAN	SD	PTS	%USE A	M	ANOMALY C					
20090316/233210	20090316/234300	0.010	0.026	25	96.0	-0.010	0.013	25	96.0	-	-	-	-	-	0	0.0	-	-	-	0	0.0	1									
20090317/072440	20090317/073430	0.010	0.017	14	100.0	-0.005	0.006	15	100.0	-	-	-	-	-	0	0.0	-	-	-	0	0.0	1									
20090317/215200	20090317/221000	-0.021	0.020	17	76.5	-0.040	0.022	20	85.0	-	-	-	-	-	0	0.0	-	-	-	0	0.0	1									

STATION = MIL3 SATELLITE = STS-119

RESIDUALS								VDNA NOISE								RATING																																			
MEAN	DEV	SD	RSS	PTS	PASSES	MIN	MAX	RMS	PASSES	TOTALPASSES	%USE	ANOMALY	MEAN	SD	PTS	%USE A	MEAN	SD	PTS	%USE A	MEAN	SD	PTS	%USE A	M	ANOMALY C																									
ANGLE 1 (DEG)	0.001	-----	0.022	-----	56	3	0.0082	0.0121	0.0101	3	3	91.1	ANGLE 2 (DEG)	-0.019	-----	0.016	-----	60	3	0.0023	0.0060	0.0040	3	3	93.3	RANGE (M)	-----	-----	-----	-----	0	0	-----	-----	-----	0	3	0.0	RANGE-RATE (M/S)	-----	-----	-----	-----	0	0	-----	-----	0	3	0.0	0.0
RANGE (M)	-----	-----	-----	-----	0	0	-----	-----	-----	0	3	0.0	RANGE-RATE (M/S)	-----	-----	-----	-----	0	0	-----	-----	0	3	0.0	0.0																										

STATION = MIL3 SATELLITE = STS-119 SUMMARY

STATION = WL2F SATELLITE = ISS

ANGLE 1 RESIDUALS (DEG)								ANGLE 2 RESIDUALS (DEG)								RANGE RESIDUALS (M)								RANGE-RATE RESIDUALS (M/S)							
	MEAN	SD	PTS	%USE A		MEAN	SD	PTS	%USE A		MEAN	SD	PTS	%USE A		MEAN	SD	PTS	%USE A		MEAN	SD	PTS	%USE A	M	ANOMALY C					
20090316/230824	20090316/231948	0.004	0.010	63	100.0	0.005	0.013	63	100.0	-3.008	11.670	63	100.0	-	-	-	-	-	0	0.0	0										
20090317/004354	20090317/005512	0.003	0.012	60	100.0	-0.007	0.014	60	100.0	11.418	14.172	60	100.0	-	-	-	-	-	0	0.0	0										
20090317/053324	20090317/054518	0.003	0.014	57	100.0	0.004	0.016	57	100.0	11.027	10.640	57	100.0	-	-	-	-	-	0	0.0	0										
20090317/070824	20090317/072036	0.005	0.018	64	100.0	0.001	0.016	64	100.0	-4.904	13.268	64	100.0	-	-	-	-	-	0	0.0	0										

STATION = WL2F SATELLITE = ISS		RESIDUALS										VDNA NOISE										RATING									
ANGLE 1 (DEG)		MEAN	DEV	SD	RSS	PTS	PASSES	MIN	MAX	RMS	PASSES	TOTALPASSES	%USE	ANOMALY																	
ANGLE 1 (DEG)	0.004	0.003		0.014	0.014	244	4	0.0100	0.0149	0.0124	4	4	4	100.0																	
ANGLE 2 (DEG)	0.001	0.017		0.015	0.017	244	4	0.0113	0.0147	0.0129	4	4	4	100.0																	
RANGE (M)	3.321	28.002		12.537	19.085	244	4	9.4647	11.8144	10.6437	4	4	4	100.0																	
RANGE-RATE (M/S)	-----	-----	-----	-----	-----	0	0	-----	-----	-----	0	0	4	0.0																	
STATION = WL2F SATELLITE = ISS		SUMMARY																													
STATION = WL2F SATELLITE = STS-119		RESIDUALS										VDNA NOISE										RATING									
ANGLE 1 RESIDUALS (DEG)		RESIDUALS										RESIDUALS										RESIDUALS									
ANGLE 1 RESIDUALS (DEG)		MEAN	DEV	SD	RSS	PTS	%USE A	MEAN	SD	PTS	%USE A	MEAN	SD	PTS	%USE A	MEAN	SD	PTS	%USE A	MEAN	SD	%USE A	M	ANOMALY C							
20090316/233342	20090316/234424	0.004	0.011	50	100.0	0.012	0.014	50	100.0	-0.159	6.687	50	100.0	-----	-----	-----	-----	-----	-----	0	0.0	0									
20090317/010812	20090317/011718	0.004	0.012	32	100.0	-0.007	0.016	32	100.0	1.083	6.906	32	100.0	-----	-----	-----	-----	-----	-----	0	0.0	0									
20090317/220100	20090317/221206	0.009	0.016	35	100.0	0.010	0.014	35	100.0	1.725	8.088	35	100.0	-----	-----	-----	-----	-----	-----	0	0.0	0									
STATION = WL2F SATELLITE = STS-119		RESIDUALS										VDNA NOISE										RATING									
ANGLE 1 RESIDUALS (DEG)		MEAN	DEV	SD	RSS	PTS	PASSES	MIN	MAX	RMS	PASSES	TOTALPASSES	%USE	ANOMALY																	
ANGLE 1 (DEG)	0.005	-----	0.013	-----	117	3	0.0053	0.0102	0.0072	3	3	3	100.0																		
ANGLE 2 (DEG)	0.006	-----	0.015	-----	117	3	0.0043	0.0154	0.0107	3	3	3	100.0																		
RANGE (M)	0.744	-----	7.190	-----	117	3	2.9716	5.6792	4.0313	3	3	3	100.0																		
RANGE-RATE (M/S)	-----	-----	-----	-----	-----	0	0	-----	-----	-----	0	3	3	0.0																	
STATION = WL2F SATELLITE = STS-119		SUMMARY																													
STATION = WLPQ SATELLITE = STS-119		RESIDUALS										VDNA NOISE										RATING									
ANGLE 1 RESIDUALS (DEG)		MEAN	DEV	SD	RSS	PTS	%USE A	MEAN	SD	PTS	%USE A	MEAN	SD	PTS	%USE A	MEAN	SD	PTS	%USE A	MEAN	SD	%USE A	M	ANOMALY C							
20090317/054942	20090317/060012	-0.001	0.004	46	100.0	0.011	0.003	46	100.0	-1.623	6.849	46	100.0	-----	-----	-----	-----	-----	-----	0	0.0	0									
20090317/072300	20090317/073300	-0.002	0.004	41	100.0	0.003	0.002	41	100.0	-3.232	7.367	41	100.0	-----	-----	-----	-----	-----	-----	0	0.0	0									
STATION = WLPQ SATELLITE = STS-119		RESIDUALS										VDNA NOISE										RATING									
ANGLE 1 (DEG)		MEAN	DEV	SD	RSS	PTS	PASSES	MIN	MAX	RMS	PASSES	TOTALPASSES	%USE	ANOMALY																	
ANGLE 1 (DEG)	-0.001	-----	0.004	-----	87	2	0.0019	0.0020	0.0020	2	2	2	100.0																		
ANGLE 2 (DEG)	0.007	-----	0.003	-----	87	2	0.0013	0.0019	0.0016	2	2	2	100.0																		
RANGE (M)	-2.381	-----	7.097	-----	87	2	2.0693	2.3438	2.2108	2	2	2	100.0																		

RANGE-RATE (M/S) ----- 0 0 ----- 0 2 0.0

STATION = WLPQ SATELLITE = STS-119 SUMMARY

COMBINED STATISTICS FOR EACH STATION

STATION = AGO3

SATELLITE = STS-119

	RESIDUALS				VDNA NOISE				RATING				
	MEAN	DEV	SD	RSS	PTS	PASSES	MIN	MAX	RMS	PASSES	TOTALPASSES	%USE	ANOMALY
ANGLE 1 (DEG)	0.044	-----	0.032	-----	50	2	0.0057	0.0076	0.0064	2	2	92.0	
ANGLE 2 (DEG)	-0.020	-----	0.010	-----	58	2	0.0048	0.0056	0.0053	2	2	100.0	
RANGE (M)	-----	-----	-----	-----	0	0	-----	-----	-----	0	2	0.0	
RANGE-RATE (M/S)	-----	-----	-----	-----	0	0	-----	-----	-----	0	2	0.0	

COMBINED STATISTICS SUMMARY FOR AGO3

STATION = ANTO

SATELLITE = ISS

SATELLITE = STS-119

	RESIDUALS				VDNA NOISE				RATING				
	MEAN	DEV	SD	RSS	PTS	PASSES	MIN	MAX	RMS	PASSES	TOTALPASSES	%USE	ANOMALY
ANGLE 1 (DEG)	0.002	-----	0.003	-----	93	2	0.0008	0.0012	0.0011	2	2	100.0	
ANGLE 2 (DEG)	-0.006	-----	0.006	-----	93	2	0.0013	0.0040	0.0025	2	2	100.0	
RANGE (M)	-0.255	-----	17.574	-----	93	2	2.5367	5.3426	4.7186	2	2	100.0	
RANGE-RATE (M/S)	-----	-----	-----	-----	0	0	-----	-----	-----	0	2	0.0	

COMBINED STATISTICS SUMMARY FOR ANTO

STATION = ASCQ

SATELLITE = ISS

	RESIDUALS				VDNA NOISE				RATING				
	MEAN	DEV	SD	RSS	PTS	PASSES	MIN	MAX	RMS	PASSES	TOTALPASSES	%USE	ANOMALY
ANGLE 1 (DEG)	0.001	-----	0.004	-----	162	3	0.0007	0.0037	0.0027	3	3	100.0	
ANGLE 2 (DEG)	0.005	-----	0.007	-----	162	3	0.0022	0.0042	0.0032	3	3	100.0	

RANGE (M)	5.013 -----	15.628 -----	162	3	12.1923	15.5560	13.9298	3	3	3	99.4
RANGE-RATE (M/S)	----- ----- -----	-----	0	0	-----	-----	-----	0	3	3	0.0

COMBINED STATISTICS SUMMARY FOR ASCQ

STATION = EAFF
 SATELLITE = ISS
 SATELLITE = STS-119

	RESIDUALS				VDNA NOISE						RATING		
	MEAN	DEV	SD	RSS	PTS	PASSES	MIN	MAX	RMS	PASSES	TOTALPASSES	%USE	ANOMALY
ANGLE 1 (DEG)	-0.003	-----	0.011	-----	158	3	0.0060	0.0069	0.0067	3	3	100.0	
ANGLE 2 (DEG)	-0.003	-----	0.009	-----	164	3	0.0049	0.0064	0.0058	3	3	100.0	
RANGE (M)	5.700	-----	17.933	-----	164	3	4.8630	18.0104	14.1030	3	3	96.3	
RANGE-RATE (M/S)	-----	-----	-----	-----	0	0	-----	-----	-----	0	3	0.0	

COMBINED STATISTICS SUMMARY FOR EAFF

STATION = FRCF
 SATELLITE = ISS
 SATELLITE = STS-119

	RESIDUALS				VDNA NOISE						RATING		
	MEAN	DEV	SD	RSS	PTS	PASSES	MIN	MAX	RMS	PASSES	TOTALPASSES	%USE	ANOMALY
ANGLE 1 (DEG)	-0.005	0.016	0.010	0.013	198	4	0.0032	0.0115	0.0068	4	4	100.0	
ANGLE 2 (DEG)	-0.004	0.026	0.015	0.020	198	4	0.0073	0.0142	0.0096	4	4	100.0	
RANGE (M)	0.872	25.280	18.774	22.649	198	4	3.5909	22.2800	14.5422	4	4	98.5	
RANGE-RATE (M/S)	-----	-----	-----	-----	0	0	-----	-----	-----	0	4	0.0	

COMBINED STATISTICS SUMMARY FOR FRCF

STATION = KMRF
 SATELLITE = STS-119

	RESIDUALS				VDNA NOISE						RATING		
	MEAN	DEV	SD	RSS	PTS	PASSES	MIN	MAX	RMS	PASSES	TOTALPASSES	%USE	ANOMALY
ANGLE 1 (DEG)	0.002	-----	0.015	-----	52	1	0.0118	0.0118	0.0118	1	1	100.0	
ANGLE 2 (DEG)	-0.022	-----	0.039	-----	52	1	0.0195	0.0195	0.0195	1	1	96.2	
RANGE (M)	-0.080	-----	7.033	-----	52	1	4.3301	4.3301	4.3301	1	1	100.0	
RANGE-RATE (M/S)	-----	-----	-----	-----	0	0	-----	-----	-----	0	1	0.0	

COMBINED STATISTICS SUMMARY FOR KMRF

STATION = MIL3
 SATELLITE = STS-119

RESIDUALS

	MEAN	DEV	SD	RSS	PTS	PASSES	MIN	MAX	RMS	PASSES	TOTALPASSES	%USE	ANOMALY
ANGLE 1 (DEG)	0.001	-----	0.022	-----	56	3	0.0082	0.0121	0.0101	3	3	91.1	
ANGLE 2 (DEG)	-0.019	-----	0.016	-----	60	3	0.0023	0.0060	0.0040	3	3	93.3	
RANGE (M)	-----	-----	-----	-----	0	0	-----	-----	-----	0	3	0.0	
RANGE-RATE (M/S)	-----	-----	-----	-----	0	0	-----	-----	-----	0	3	0.0	

COMBINED STATISTICS SUMMARY FOR MIL3

STATION = WL2F
 SATELLITE = ISS
 SATELLITE = STS-119

RESIDUALS

	MEAN	DEV	SD	RSS	PTS	PASSES	MIN	MAX	RMS	PASSES	TOTALPASSES	%USE	ANOMALY
ANGLE 1 (DEG)	0.004	0.004	0.014	0.014	361	7	0.0053	0.0149	0.0112	7	7	100.0	
ANGLE 2 (DEG)	0.003	0.017	0.015	0.017	361	7	0.0043	0.0154	0.0123	7	7	100.0	
RANGE (M)	2.486	16.909	11.100	14.173	361	7	2.9716	11.8144	9.2385	7	7	100.0	
RANGE-RATE (M/S)	-----	-----	-----	-----	0	0	-----	-----	-----	0	7	0.0	

COMBINED STATISTICS SUMMARY FOR WL2F

STATION = WLPO
 SATELLITE = STS-119

RESIDUALS

	MEAN	DEV	SD	RSS	PTS	PASSES	MIN	MAX	RMS	PASSES	TOTALPASSES	%USE	ANOMALY
ANGLE 1 (DEG)	-0.001	-----	0.004	-----	87	2	0.0019	0.0020	0.0020	2	2	100.0	
ANGLE 2 (DEG)	0.007	-----	0.003	-----	87	2	0.0013	0.0019	0.0016	2	2	100.0	
RANGE (M)	-2.381	-----	7.097	-----	87	2	2.0693	2.3438	2.2108	2	2	100.0	
RANGE-RATE (M/S)	-----	-----	-----	-----	0	0	-----	-----	-----	0	2	0.0	

COMBINED STATISTICS SUMMARY FOR WLPO

STATISTICS INTERVAL 2

STATION = AGO3 SATELLITE = STS-119

ANGLE 1 RESIDUALS (DEG)					ANGLE 2 RESIDUALS (DEG)					RANGE RESIDUALS (M)					RANGE-RATE RESIDUALS (M/S)				
MEAN	SD	PTS	%USE A	MEAN	SD	PTS	%USE A	MEAN	SD	PTS	%USE A	MEAN	SD	PTS	%USE A	M	ANOMALY C		
20090316/184240	20090316/185030	0.031	0.013	31	100.0	-0.014	0.007	31	100.0	-----	-----	0	0.0	-----	-----	0	0.0	1	
20090317/170330	20090317/170950	0.066	0.011	8	100.0	-0.028	0.011	16	100.0	-----	-----	0	0.0	-----	-----	0	0.0	1	
20090317/183600	20090317/185140	0.040	0.034	42	90.5	-0.017	0.010	42	100.0	-----	-----	0	0.0	-----	-----	0	0.0	1	

STATION = AGO3 SATELLITE = STS-119

RESIDUALS					VDNA NOISE					RATING					MEAN	DEV	SD	RSS	PTS
MEAN	DEV	SD	RSS	PTS	PASSES	MIN	MAX	RMS	PASSES	TOTALPASSES	%USE	ANOMALY	MEAN	DEV	SD	RSS	PTS	RATING	
ANGLE 1 (DEG)	0.039	-----	0.026	-----	81	3	0.0029	0.0076	0.0055	3	3	95.1	ANGLE 1 (DEG)	0.039	-----	0.026	-----	81	3
ANGLE 2 (DEG)	-0.018	-----	0.009	-----	89	3	0.0031	0.0056	0.0047	3	3	100.0	ANGLE 2 (DEG)	-0.018	-----	0.009	-----	89	3
RANGE (M)	-----	-----	-----	-----	0	0	-----	-----	-----	0	3	0.0	RANGE (M)	-----	-----	-----	-----	0	0
RANGE-RATE (M/S)	-----	-----	-----	-----	0	0	-----	-----	-----	0	3	0.0	RANGE-RATE (M/S)	-----	-----	-----	-----	0	0

STATION = AGO3 SATELLITE = STS-119 SUMMARY

STATION = ANTQ SATELLITE = ISS

ANGLE 1 RESIDUALS (DEG)					ANGLE 2 RESIDUALS (DEG)					RANGE RESIDUALS (M)					RANGE-RATE RESIDUALS (M/S)				
MEAN	SD	PTS	%USE A	MEAN	SD	PTS	%USE A	MEAN	SD	PTS	%USE A	MEAN	SD	PTS	%USE A	M	ANOMALY C		
20090315/210306	20090315/211554	0.004	0.003	58	100.0	-0.004	0.006	58	100.0	-1.885	6.326	58	100.0	-----	-----	0	0.0	0	
20090315/223848	20090315/225036	0.005	0.002	41	100.0	-0.003	0.005	41	100.0	-2.425	8.166	41	100.0	-----	-----	0	0.0	0	
20090317/202342	20090317/203448	0.001	0.003	62	100.0	-0.008	0.004	62	100.0	-2.423	21.014	62	100.0	-----	-----	0	0.0	0	

STATION = ANTQ SATELLITE = ISS SUMMARY

RESIDUALS					VDNA NOISE					RATING					MEAN	DEV	SD	RSS	PTS
MEAN	DEV	SD	RSS	PTS	PASSES	MIN	MAX	RMS	PASSES	TOTALPASSES	%USE	ANOMALY	MEAN	DEV	SD	RSS	PTS	RATING	
ANGLE 1 (DEG)	0.003	-----	0.003	-----	161	3	0.0012	0.0014	0.0013	3	3	100.0	ANGLE 1 (DEG)	0.003	-----	0.003	-----	161	3
ANGLE 2 (DEG)	-0.005	-----	0.005	-----	161	3	0.0013	0.0057	0.0040	3	3	100.0	ANGLE 2 (DEG)	-0.005	-----	0.005	-----	161	3
RANGE (M)	-2.230	-----	14.206	-----	161	3	4.5078	8.6083	6.1131	3	3	100.0	RANGE (M)	-2.230	-----	14.206	-----	161	3
RANGE-RATE (M/S)	-----	-----	-----	-----	0	0	-----	-----	-----	0	3	0.0	RANGE-RATE (M/S)	-----	-----	-----	-----	0	0

STATION = ANTQ SATELLITE = ISS SUMMARY

ANGLE 1 RESIDUALS (DEG)					ANGLE 2 RESIDUALS (DEG)					RANGE RESIDUALS (M)					RANGE-RATE RESIDUALS (M/S)				
MEAN	SD	PTS	%USE A	MEAN	SD	PTS	%USE A	MEAN	SD	PTS	%USE A	MEAN	SD	PTS	%USE A	M	ANOMALY C		
20090317/220012	20090317/220924	0.005	0.002	31	100.0	-0.001	0.008	31	100.0	4.080	6.238	31	100.0	-----	-----	0	0.0	0	

STATION = ANTO SATELLITE = STS-119

RESIDUALS

	MEAN	DEV	SD	RSS	PTS	PASSES	MIN	MAX	RMS	PASSES	TOTALPASSES	%USE	ANOMALY
ANGLE 1 (DEG)	0.005	-----	0.002	-----	31	1	0.0008	0.0008	0.0008	1	1	100.0	
ANGLE 2 (DEG)	-0.001	-----	0.008	-----	31	1	0.0040	0.0040	0.0040	1	1	100.0	
RANGE (M)	4.080	-----	6.238	-----	31	1	2.5367	2.5367	2.5367	1	1	100.0	
RANGE-RATE (M/S)	-----	-----	-----	-----	0	0	-----	-----	-----	0	1	0.0	

STATION = ANTO SATELLITE = STS-119 SUMMARY

STATION = ASCQ SATELLITE = ISS

ANGLE 1 RESIDUALS (DEG)				ANGLE 2 RESIDUALS (DEG)				RANGE RESIDUALS (M)				RANGE-RATE RESIDUALS (M/S)			
	MEAN	SD	PTS %USE A		MEAN	SD	PTS %USE A		MEAN	SD	PTS %USE A		MEAN	SD	PTS %USE A M ANOMALY C
20090315/162100	20090315/163148	0.002	0.005	41 100.0	0.010	0.006	41 100.0	3.803	14.491	41 100.0	-----	-----	-----	0	0.0 0
20090315/175618	20090315/180736	-0.001	0.005	51 100.0	0.010	0.006	51 100.0	5.682	17.247	51 98.0	-----	-----	-----	0	0.0 0
20090316/164730	20090316/170000	0.001	0.004	65 100.0	0.002	0.004	69 100.0	9.381	10.478	69 100.0	-----	-----	-----	0	0.0 0
20090317/055206	20090317/060324	-0.000	0.002	64 100.0	0.007	0.005	64 100.0	6.270	15.406	64 100.0	-----	-----	-----	0	0.0 0
20090317/154006	20090317/155148	0.003	0.004	50 100.0	-0.003	0.007	50 100.0	6.611	17.052	50 98.0	-----	-----	-----	0	0.0 0
20090317/171506	20090317/172606	-0.000	0.005	48 100.0	0.012	0.008	48 100.0	1.674	14.318	48 100.0	-----	-----	-----	0	0.0 0

STATION = ASCQ SATELLITE = ISS SUMMARY

	MEAN	DEV	SD	RSS	PTS	PASSES	MIN	MAX	RMS	PASSES	TOTALPASSES	%USE	ANOMALY
ANGLE 1 (DEG)	0.001	0.004	0.004	0.005	319	6	0.0004	0.0037	0.0025	6	6	100.0	
ANGLE 2 (DEG)	0.006	0.014	0.006	0.011	323	6	0.0004	0.0043	0.0029	6	6	100.0	
RANGE (M)	5.898	6.849	14.815	16.309	323	6	7.6611	17.6598	13.6348	6	6	99.4	
RANGE-RATE (M/S)	-----	-----	-----	-----	0	0	-----	-----	-----	0	6	0.0	

STATION = ASCQ SATELLITE = ISS SUMMARY

STATION = ASCQ SATELLITE = STS-119

ANGLE 1 RESIDUALS (DEG)				ANGLE 2 RESIDUALS (DEG)				RANGE RESIDUALS (M)				RANGE-RATE RESIDUALS (M/S)			
	MEAN	SD	PTS %USE A		MEAN	SD	PTS %USE A		MEAN	SD	PTS %USE A		MEAN	SD	PTS %USE A M ANOMALY C
20090316/172206	20090316/173218	0.001	0.005	47 100.0	0.013	0.005	47 100.0	-3.518	10.507	47 100.0	-----	-----	-----	0	0.0 0

STATION = ASCQ SATELLITE = STS-119 SUMMARY

	MEAN	DEV	SD	RSS	PTS	PASSES	MIN	MAX	RMS	PASSES	TOTALPASSES	%USE	ANOMALY
ANGLE 1 (DEG)	0.001	-----	0.005	-----	47	1	0.0018	0.0018	0.0018	1	1	100.0	

ANGLE 2 (DEG)	0.013 -----	0.005 -----	47	1	0.0012	0.0012	0.0012	1	1	100.0
RANGE (M)	-3.518 -----	10.507 -----	47	1	5.1062	5.1062	5.1062	1	1	100.0
RANGE-RATE (M/S)	----- -----	----- -----	0	0	----- -----	----- -----	----- -----	0	1	0.0

STATION = ASCQ SATELLITE = STS-119 SUMMARY

STATION = EAFF SATELLITE = ISS		ANGLE 1 RESIDUALS (DEG)	ANGLE 2 RESIDUALS (DEG)	RANGE RESIDUALS (M)	RANGE-RATE RESIDUALS (M/S)
		MEAN SD PTS %USE A	MEAN SD PTS %USE A	MEAN SD PTS %USE A	MEAN SD PTS %USE A M ANOMALY C
20090316/014512	20090316/015600	0.006 0.009 54 100.0	-0.000 0.006 54 100.0	-1.350 23.546 54 98.1	----- ----- 0 0.0 0
20090316/031954	20090316/033130	0.000 0.006 63 100.0	-0.005 0.011 63 100.0	1.078 17.255 63 98.4	----- ----- 0 0.0 0
20090316/094554	20090316/095730	-0.001 0.006 67 100.0	-0.004 0.007 67 100.0	5.283 19.621 66 97.0	----- ----- 0 0.0 0
20090316/112142	20090316/113106	0.003 0.011 29 100.0	-0.000 0.006 29 100.0	8.596 18.289 29 100.0	----- ----- 0 0.0 0
20090317/021130	20090317/022330	-0.005 0.015 62 100.0	-0.003 0.008 68 100.0	0.889 16.182 68 98.5	----- ----- 0 0.0 0
20090317/083742	20090317/084842	-0.004 0.008 55 100.0	-0.004 0.009 55 100.0	12.229 24.073 55 90.9	----- ----- 0 0.0 0

STATION = EAFF SATELLITE = ISS

		RESIDUALS				VDNA NOISE				RATING				
		MEAN	DEV	SD	RSS	PTS	PASSES	MIN	MAX	RMS	PASSES	TOTALPASSES	%USE	ANOMALY
ANGLE 1 (DEG)	-0.001	0.011	0.010	0.011	330	6	0.0050	0.0113	0.0071	6	6	100.0	-----	-----
ANGLE 2 (DEG)	-0.003	0.005	0.008	0.009	336	6	0.0049	0.0063	0.0055	6	6	100.0	-----	-----
RANGE (M)	3.958	13.045	19.960	21.368	335	6	12.6056	19.2360	15.8974	6	6	97.0	-----	-----
RANGE-RATE (M/S)	----- -----	----- -----	----- -----	----- -----	0	0	----- -----	----- -----	----- -----	0	6	0.0	-----	-----

STATION = EAFF SATELLITE = ISS SUMMARY

STATION = EAFF SATELLITE = STS-119		ANGLE 1 RESIDUALS (DEG)	ANGLE 2 RESIDUALS (DEG)	RANGE RESIDUALS (M)	RANGE-RATE RESIDUALS (M/S)
		MEAN SD PTS %USE A	MEAN SD PTS %USE A	MEAN SD PTS %USE A	MEAN SD PTS %USE A M ANOMALY C
20090317/102300	20090317/103212	0.002 0.008 41 100.0	0.000 0.010 41 100.0	4.919 8.572 41 100.0	----- ----- 0 0.0 0

STATION = EAFF SATELLITE = STS-119

		RESIDUALS				VDNA NOISE				RATING				
		MEAN	DEV	SD	RSS	PTS	PASSES	MIN	MAX	RMS	PASSES	TOTALPASSES	%USE	ANOMALY
ANGLE 1 (DEG)	0.002 -----	0.008 -----	41	1	0.0060	0.0060	0.0060	1	1	100.0	-----	-----	-----	-----
ANGLE 2 (DEG)	0.000 -----	0.010 -----	41	1	0.0064	0.0064	0.0064	1	1	100.0	-----	-----	-----	-----
RANGE (M)	4.919 -----	8.572 -----	41	1	4.8630	4.8630	4.8630	1	1	100.0	-----	-----	-----	-----
RANGE-RATE (M/S)	----- -----	----- -----	0	0	----- -----	----- -----	----- -----	0	1	0.0	-----	-----	-----	-----

STATION = EAFF SATELLITE = STS-119 SUMMARY

STATION = FRCF SATELLITE = ISS

		ANGLE 1 RESIDUALS (DEG)					ANGLE 2 RESIDUALS (DEG)					RANGE RESIDUALS (M)					RANGE-RATE RESIDUALS (M/S)						
		MEAN	SD	PTS	%USE A	MEAN	SD	PTS	%USE A	MEAN	SD	PTS	%USE A	MEAN	SD	PTS	%USE A	MEAN	SD	PTS	%USE A	M	ANOMALY C
20090315/025224	20090315/030424	-0.007	0.009	68	100.0	0.002	0.008	68	100.0	0.596	13.666	68	98.5	-----	-----	-----	-----	0	0.0	0			
20090315/042848	20090315/043924	-0.009	0.007	43	100.0	-0.008	0.010	43	100.0	4.110	21.786	43	100.0	-----	-----	-----	-----	0	0.0	0			
20090315/091854	20090315/092936	-0.003	0.010	52	100.0	0.003	0.014	52	100.0	7.250	23.588	52	96.2	-----	-----	-----	-----	0	0.0	0			
20090315/105354	20090315/110530	-0.002	0.008	65	100.0	0.006	0.010	65	100.0	2.510	18.589	65	98.5	-----	-----	-----	-----	0	0.0	0			
20090316/081100	20090316/082018	-0.000	0.009	17	100.0	-0.004	0.015	17	100.0	4.725	20.383	17	100.0	-----	-----	-----	-----	0	0.0	0			
20090317/034800	20090317/035818	-0.008	0.011	39	100.0	-0.016	0.016	39	100.0	11.056	23.055	39	97.4	-----	-----	-----	-----	0	0.0	0			
20090317/101254	20090317/102424	0.001	0.007	63	100.0	0.002	0.010	63	100.0	-5.726	24.086	63	96.8	-----	-----	-----	-----	0	0.0	0			

STATION = FRCF SATELLITE = ISS

RESIDUALS					VDNA NOISE					RATING										
MEAN	DEV	SD	RSS	PTS PASSES	MIN	MAX	RMS	PASSES	TOTALPASSES	%USE	ANOMALY	MEAN	SD	PTS	%USE	A	M	ANOMALY	C	
ANGLE 1 (DEG)	-0.004	0.009	0.009	0.011	347	7	0.0044	0.0115	0.0065	7	7	100.0	-----	-----	-----	-----	0	0.0	0	
ANGLE 2 (DEG)	-0.001	0.018	0.011	0.015	347	7	0.0064	0.0142	0.0100	7	7	100.0	-----	-----	-----	-----	0	0.0	0	
RANGE (M)	2.617	13.256	20.705	21.897	347	7	12.8557	23.6165	17.8628	7	7	98.0	-----	-----	-----	-----	0	0.0	0	
RANGE-RATE (M/S)	-----	-----	-----	-----	0	0	-----	-----	-----	0	7	0.0	-----	-----	-----	-----	0	0.0	0	

STATION = FRCF SATELLITE = ISS SUMMARY

STATION = FRCF SATELLITE = STS-119

		ANGLE 1 RESIDUALS (DEG)					ANGLE 2 RESIDUALS (DEG)					RANGE RESIDUALS (M)					RANGE-RATE RESIDUALS (M/S)						
		MEAN	SD	PTS	%USE A	MEAN	SD	PTS	%USE A	MEAN	SD	PTS	%USE A	MEAN	SD	PTS	%USE A	MEAN	SD	PTS	%USE A	M	ANOMALY C
20090316/024224	20090316/025118	-0.002	0.006	39	100.0	0.005	0.006	41	100.0	1.453	9.421	41	100.0	-----	-----	-----	-----	0	0.0	0			
20090316/085800	20090316/090724	-0.006	0.008	31	100.0	0.002	0.011	31	100.0	4.330	8.320	31	100.0	-----	-----	-----	-----	0	0.0	0			
20090316/103100	20090316/104042	0.001	0.010	48	100.0	0.002	0.013	48	100.0	0.920	10.759	47	97.9	-----	-----	-----	-----	0	0.0	0			
20090317/023212	20090317/024254	-0.009	0.012	55	100.0	-0.006	0.018	55	100.0	5.542	11.876	55	100.0	-----	-----	-----	-----	0	0.0	0			
20090317/084954	20090317/085912	-0.006	0.009	41	100.0	0.002	0.015	41	100.0	-4.942	10.719	41	100.0	-----	-----	-----	-----	0	0.0	0			

STATION = FRCF SATELLITE = STS-119

RESIDUALS					VDNA NOISE					RATING										
MEAN	DEV	SD	RSS	PTS PASSES	MIN	MAX	RMS	PASSES	TOTALPASSES	%USE	ANOMALY	MEAN	SD	PTS	%USE	A	M	ANOMALY	C	
ANGLE 1 (DEG)	-0.004	0.012	0.010	0.012	214	5	0.0032	0.0062	0.0047	5	5	100.0	-----	-----	-----	-----	0	0.0	0	
ANGLE 2 (DEG)	0.001	0.012	0.014	0.015	216	5	0.0034	0.0123	0.0074	5	5	100.0	-----	-----	-----	-----	0	0.0	0	
RANGE (M)	1.578	11.326	10.503	12.036	215	5	3.5909	6.8032	5.8549	5	5	99.5	-----	-----	-----	-----	0	0.0	0	
RANGE-RATE (M/S)	-----	-----	-----	-----	0	0	-----	-----	-----	0	5	0.0	-----	-----	-----	-----	0	0.0	0	

STATION = FRCF SATELLITE = STS-119 SUMMARY

STATION = KMRF SATELLITE = STS-119

ANGLE 1 RESIDUALS (DEG)					ANGLE 2 RESIDUALS (DEG)					RANGE RESIDUALS (M)					RANGE-RATE RESIDUALS (M/S)						
MEAN	SD	PTS	%USE A	MEAN	SD	PTS	%USE A	MEAN	SD	PTS	%USE A	MEAN	SD	PTS	%USE A	MEAN	SD	PTS	%USE A	M	ANOMALY C
20090317/162712	20090317/163842	0.002	0.015	52	100.0	-0.022	0.039	52	96.2	-0.080	7.033	52	100.0	-----	-----	-----	-----	0	0.0	0	

STATION = KMRF SATELLITE = STS-119

RESIDUALS					VDNA NOISE					RATING															
MEAN	DEV	SD	RSS	PTS	PASSES	MIN	MAX	RMS	PASSES	TOTALPASSES	%USE	ANOMALY	MEAN	DEV	SD	RSS	PTS	PASSES	MIN	MAX	RMS	PASSES	TOTALPASSES	%USE	ANOMALY
ANGLE 1 (DEG)	0.002	-----	0.015	-----	52	1	0.0118	0.0118	0.0118	1	1	100.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----		
ANGLE 2 (DEG)	-0.022	-----	0.039	-----	52	1	0.0195	0.0195	0.0195	1	1	96.2	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----		
RANGE (M)	-0.080	-----	7.033	-----	52	1	4.3301	4.3301	4.3301	1	1	100.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----		
RANGE-RATE (M/S)	-----	-----	-----	-----	0	0	-----	-----	-----	0	1	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----		

STATION = KMRF SATELLITE = STS-119 SUMMARY

STATION = MIL3 SATELLITE = STS-119

ANGLE 1 RESIDUALS (DEG)					ANGLE 2 RESIDUALS (DEG)					RANGE RESIDUALS (M)					RANGE-RATE RESIDUALS (M/S)							
MEAN	SD	PTS	%USE A	MEAN	SD	PTS	%USE A	MEAN	SD	PTS	%USE A	MEAN	SD	PTS	%USE A	MEAN	SD	PTS	%USE A	M	ANOMALY C	
20090316/073300	20090316/074300	0.021	0.008	10	100.0	-0.008	0.006	14	100.0	-----	-----	0	0.0	-----	-----	0	0.0	1	-----	-----	-----	-----
20090316/090620	20090316/091420	0.012	0.009	7	100.0	0.007	0.005	7	100.0	-----	-----	0	0.0	-----	-----	0	0.0	1	-----	-----	-----	-----
20090316/233210	20090316/234300	0.010	0.026	25	96.0	-0.010	0.013	25	96.0	-----	-----	0	0.0	-----	-----	0	0.0	1	-----	-----	-----	-----
20090317/072440	20090317/073430	0.010	0.017	14	100.0	-0.005	0.006	15	100.0	-----	-----	0	0.0	-----	-----	0	0.0	1	-----	-----	-----	-----
20090317/215200	20090317/221000	-0.021	0.020	17	76.5	-0.040	0.022	20	85.0	-----	-----	0	0.0	-----	-----	0	0.0	1	-----	-----	-----	-----

STATION = MIL3 SATELLITE = STS-119

RESIDUALS					VDNA NOISE					RATING															
MEAN	DEV	SD	RSS	PTS	PASSES	MIN	MAX	RMS	PASSES	TOTALPASSES	%USE	ANOMALY	MEAN	DEV	SD	RSS	PTS	PASSES	MIN	MAX	RMS	PASSES	TOTALPASSES	%USE	ANOMALY
ANGLE 1 (DEG)	0.004	0.045	0.020	0.030	73	5	0.0058	0.0121	0.0097	5	5	93.2	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----		
ANGLE 2 (DEG)	-0.015	0.047	0.014	0.031	81	5	0.0023	0.0071	0.0050	5	5	95.1	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----		
RANGE (M)	-----	-----	-----	-----	0	0	-----	-----	-----	0	5	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----		
RANGE-RATE (M/S)	-----	-----	-----	-----	0	0	-----	-----	-----	0	5	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----		

STATION = MIL3 SATELLITE = STS-119 SUMMARY

STATION = WL2F SATELLITE = ISS

ANGLE 1 RESIDUALS (DEG)					ANGLE 2 RESIDUALS (DEG)					RANGE RESIDUALS (M)					RANGE-RATE RESIDUALS (M/S)							
MEAN	SD	PTS	%USE A	MEAN	SD	PTS	%USE A	MEAN	SD	PTS	%USE A	MEAN	SD	PTS	%USE A	MEAN	SD	PTS	%USE A	M	ANOMALY C	
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

20090314/234942	20090314/235954	0.005	0.010	61	100.0	0.009	0.009	61	100.0	10.487	12.620	61	100.0	-----	-----	0	0.0	0
20090315/012454	20090315/013718	0.000	0.015	60	100.0	-0.004	0.013	60	100.0	-3.406	10.030	60	100.0	-----	-----	0	0.0	0
20090315/030206	20090315/031242	0.003	0.018	13	100.0	-0.006	0.021	13	100.0	-10.562	17.840	13	100.0	-----	-----	0	0.0	0
20090315/061424	20090315/062618	-0.000	0.011	56	100.0	0.003	0.014	56	100.0	3.476	17.412	56	100.0	-----	-----	0	0.0	0
20090315/074936	20090315/080136	0.002	0.011	65	100.0	0.001	0.013	65	100.0	4.507	13.689	65	100.0	-----	-----	0	0.0	0
20090315/224206	20090315/225242	0.009	0.016	20	100.0	0.017	0.016	20	100.0	1.383	15.336	20	100.0	-----	-----	0	0.0	0
20090316/230824	20090316/231948	0.004	0.010	63	100.0	0.005	0.013	63	100.0	-3.008	11.670	63	100.0	-----	-----	0	0.0	0
20090317/004354	20090317/005512	0.003	0.012	60	100.0	-0.007	0.014	60	100.0	11.418	14.172	60	100.0	-----	-----	0	0.0	0
20090317/053324	20090317/054518	0.003	0.014	57	100.0	0.004	0.016	57	100.0	11.027	10.640	57	100.0	-----	-----	0	0.0	0
20090317/070824	20090317/072036	0.005	0.018	64	100.0	0.001	0.016	64	100.0	-4.904	13.268	64	100.0	-----	-----	0	0.0	0

STATION = WL2F SATELLITE = ISS

RESIDUALS

VDNA NOISE

RATING

	MEAN	DEV	SD	RSS	PTS	PASSES	MIN	MAX	RMS	PASSES	TOTALPASSES	%USE	ANOMALY
ANGLE 1 (DEG)	0.003	0.005	0.013	0.014	519	10	0.0080	0.0226	0.0118	10	10	100.0	
ANGLE 2 (DEG)	0.002	0.013	0.014	0.016	519	10	0.0078	0.0221	0.0118	10	10	100.0	
RANGE (M)	3.128	15.760	13.310	15.781	519	10	9.4647	16.5704	11.4652	10	10	100.0	
RANGE-RATE (M/S)	-----	-----	-----	-----	0	0	-----	-----	-----	0	10	0.0	

STATION = WL2F SATELLITE = ISS

SUMMARY

STATION = WL2F SATELLITE = STS-119

ANGLE 1 RESIDUALS (DEG)

MEAN	SD	PTS	%USE A
0.004	0.011	50	100.0

ANGLE 2 RESIDUALS (DEG)

MEAN	SD	PTS	%USE A
0.012	0.014	50	100.0

RANGE RESIDUALS (M)

MEAN	SD	PTS	%USE A
-0.159	6.687	50	100.0

RANGE-RATE RESIDUALS (M/S)

MEAN	SD	PTS	%USE A	M	ANOMALY C	
-----	-----	-----	-----	0	0.0	0
-----	-----	-----	-----	0	0.0	0
-----	-----	-----	-----	0	0.0	0

STATION = WL2F SATELLITE = STS-119

RESIDUALS

VDNA NOISE

RATING

	MEAN	DEV	SD	RSS	PTS	PASSES	MIN	MAX	RMS	PASSES	TOTALPASSES	%USE	ANOMALY
ANGLE 1 (DEG)	0.005	-----	0.013	-----	117	3	0.0053	0.0102	0.0072	3	3	100.0	
ANGLE 2 (DEG)	0.006	-----	0.015	-----	117	3	0.0043	0.0154	0.0107	3	3	100.0	
RANGE (M)	0.744	-----	7.190	-----	117	3	2.9716	5.6792	4.0313	3	3	100.0	
RANGE-RATE (M/S)	-----	-----	-----	-----	0	0	-----	-----	-----	0	3	0.0	

STATION = WL2F SATELLITE = STS-119

SUMMARY

STATION = WLPQ SATELLITE = ISS

ANGLE 1 RESIDUALS (DEG)

MEAN	SD	PTS	%USE A
------	----	-----	--------

ANGLE 2 RESIDUALS (DEG)

MEAN	SD	PTS	%USE A
------	----	-----	--------

RANGE RESIDUALS (M)

MEAN	SD	PTS	%USE A
------	----	-----	--------

RANGE-RATE RESIDUALS (M/S)

MEAN	SD	PTS	%USE A	M	ANOMALY C
------	----	-----	--------	---	-----------

20090316/001624	20090316/002924	-0.000	0.005	66	100.0	0.005	0.005	69	100.0	2.886	13.354	69	100.0	-----	-----	0	0.0	0
20090316/015600	20090316/020412	-0.003	0.003	42	100.0	0.010	0.004	42	100.0	-5.968	12.674	42	97.6	-----	-----	0	0.0	0
20090316/050612	20090316/051736	-0.001	0.003	36	100.0	0.014	0.003	36	100.0	-4.332	10.425	36	100.0	-----	-----	0	0.0	0
20090316/064118	20090316/065412	0.001	0.006	67	100.0	0.010	0.003	67	100.0	1.735	16.194	67	98.5	-----	-----	0	0.0	0
20090316/081718	20090316/082848	-0.002	0.003	37	100.0	0.007	0.003	37	100.0	1.163	14.953	37	100.0	-----	-----	0	0.0	0

STATION = WLPQ SATELLITE = ISS

RESIDUALS

VDNA NOISE

RATING

	MEAN	DEV	SD	RSS	PTS	PASSES	MIN	MAX	RMS	PASSES	TOTALPASSES	%USE	ANOMALY
ANGLE 1 (DEG)	-0.001	0.004	0.005	0.005	248	5	0.0021	0.0031	0.0026	5	5	100.0	
ANGLE 2 (DEG)	0.009	0.009	0.004	0.011	251	5	0.0013	0.0031	0.0021	5	5	100.0	
RANGE (M)	-0.192	10.710	13.950	14.944	251	5	10.6116	13.9374	12.0236	5	5	99.2	
RANGE-RATE (M/S)	-----	-----	-----	-----	0	0	-----	-----	-----	0	5	0.0	

STATION = WLPQ SATELLITE = ISS SUMMARY

STATION = WLPQ SATELLITE = STS-119

	ANGLE 1 RESIDUALS (DEG)				ANGLE 2 RESIDUALS (DEG)				RANGE RESIDUALS (M)				RANGE-RATE RESIDUALS (M/S)					
	MEAN	SD	PTS	%USE A	MEAN	SD	PTS	%USE A	MEAN	SD	PTS	%USE A	MEAN	SD	PTS	%USE A M ANOMALY C		
20090316/011818	20090316/012724	-0.002	0.002	24	100.0	0.010	0.004	24	100.0	-10.883	10.150	24	100.0	-----	-----	0	0.0	0
20090316/055836	20090316/060900	-0.001	0.004	39	100.0	0.010	0.003	39	100.0	-0.382	5.159	39	100.0	-----	-----	0	0.0	0
20090316/073118	20090316/074218	-0.000	0.003	48	100.0	0.004	0.003	48	100.0	-0.023	8.919	48	100.0	-----	-----	0	0.0	0
20090317/054942	20090317/060012	-0.001	0.004	46	100.0	0.011	0.003	46	100.0	-1.623	6.849	46	100.0	-----	-----	0	0.0	0
20090317/072300	20090317/073300	-0.002	0.004	41	100.0	0.003	0.002	41	100.0	-3.232	7.367	41	100.0	-----	-----	0	0.0	0

STATION = WLPQ SATELLITE = STS-119

RESIDUALS

VDNA NOISE

RATING

	MEAN	DEV	SD	RSS	PTS	PASSES	MIN	MAX	RMS	PASSES	TOTALPASSES	%USE	ANOMALY
ANGLE 1 (DEG)	-0.001	0.002	0.004	0.004	198	5	0.0008	0.0020	0.0017	5	5	100.0	
ANGLE 2 (DEG)	0.007	0.011	0.003	0.010	198	5	0.0011	0.0019	0.0014	5	5	100.0	
RANGE (M)	-2.446	10.376	7.686	9.590	198	5	2.0693	3.7362	2.9293	5	5	100.0	
RANGE-RATE (M/S)	-----	-----	-----	-----	0	0	-----	-----	-----	0	5	0.0	

STATION = WLPQ SATELLITE = STS-119 SUMMARY

COMBINED STATISTICS FOR EACH STATION

STATION = AGO3

SATELLITE = STS-119

	RESIDUALS				VDNA NOISE				RATING				
	MEAN	DEV	SD	RSS	PTS	PASSES	MIN	MAX	RMS	PASSES	TOTALPASSES	%USE	ANOMALY
ANGLE 1 (DEG)	0.039	-----	0.026	-----	81	3	0.0029	0.0076	0.0055	3	3	95.1	
ANGLE 2 (DEG)	-0.018	-----	0.009	-----	89	3	0.0031	0.0056	0.0047	3	3	100.0	
RANGE (M)	-----	-----	-----	-----	0	0	-----	-----	-----	0	3	0.0	
RANGE-RATE (M/S)	-----	-----	-----	-----	0	0	-----	-----	-----	0	3	0.0	

COMBINED STATISTICS SUMMARY FOR AGO3

STATION = ANTO

SATELLITE = ISS

SATELLITE = STS-119

	RESIDUALS				VDNA NOISE				RATING				
	MEAN	DEV	SD	RSS	PTS	PASSES	MIN	MAX	RMS	PASSES	TOTALPASSES	%USE	ANOMALY
ANGLE 1 (DEG)	0.003	0.006	0.003	0.005	192	4	0.0008	0.0014	0.0012	4	4	100.0	
ANGLE 2 (DEG)	-0.005	0.009	0.006	0.009	192	4	0.0013	0.0057	0.0040	4	4	100.0	
RANGE (M)	-1.211	8.575	13.259	13.988	192	4	2.5367	8.6083	5.7689	4	4	100.0	
RANGE-RATE (M/S)	-----	-----	-----	-----	0	0	-----	-----	-----	0	4	0.0	

COMBINED STATISTICS SUMMARY FOR ANTO

STATION = ASCQ

SATELLITE = ISS

SATELLITE = STS-119

	RESIDUALS				VDNA NOISE				RATING				
	MEAN	DEV	SD	RSS	PTS	PASSES	MIN	MAX	RMS	PASSES	TOTALPASSES	%USE	ANOMALY
ANGLE 1 (DEG)	0.001	0.003	0.004	0.005	366	7	0.0004	0.0037	0.0025	7	7	100.0	
ANGLE 2 (DEG)	0.007	0.014	0.006	0.011	370	7	0.0004	0.0043	0.0028	7	7	100.0	
RANGE (M)	4.702	10.235	14.341	15.936	370	7	5.1062	17.6598	12.9102	7	7	99.5	
RANGE-RATE (M/S)	-----	-----	-----	-----	0	0	-----	-----	-----	0	7	0.0	

COMBINED STATISTICS SUMMARY FOR ASCQ

STATION = EAFF

SATELLITE = ISS

SATELLITE = STS-119

	RESIDUALS				VDNA NOISE				RATING				
	MEAN	DEV	SD	RSS	PTS	PASSES	MIN	MAX	RMS	PASSES	TOTALPASSES	%USE	ANOMALY

	MEAN	DEV	SD	RSS	PTS	PASSES	MIN	MAX	RMS	PASSES	TOTALPASSES	%USE	ANOMALY
ANGLE 1 (DEG)	-0.000	0.010	0.009	0.011	371	7	0.0050	0.0113	0.0070	7	7	100.0	
ANGLE 2 (DEG)	-0.003	0.005	0.008	0.009	377	7	0.0049	0.0064	0.0056	7	7	100.0	
RANGE (M)	4.063	11.582	19.057	20.328	376	7	4.8630	19.2360	15.2440	7	7	97.3	
RANGE-RATE (M/S)	-----	-----	-----	-----	0	0	-----	-----	-----	0	7	0.0	

COMBINED STATISTICS SUMMARY FOR EAFF

SATION = FRCF
 SATELLITE = ISS
 SATELLITE = STS-119

	RESIDUALS				VDNA NOISE				RATING				
	MEAN	DEV	SD	RSS	PTS	PASSES	MIN	MAX	RMS	PASSES	TOTALPASSES	%USE	ANOMALY
ANGLE 1 (DEG)	-0.004	0.008	0.009	0.011	561	12	0.0032	0.0115	0.0060	12	12	100.0	
ANGLE 2 (DEG)	-0.000	0.014	0.012	0.014	563	12	0.0034	0.0142	0.0092	12	12	100.0	
RANGE (M)	2.220	10.505	17.525	18.429	562	12	3.5909	23.6165	14.7895	12	12	98.6	
RANGE-RATE (M/S)	-----	-----	-----	-----	0	0	-----	-----	-----	0	12	0.0	

COMBINED STATISTICS SUMMARY FOR FRCF

SATION = KMRF
 SATELLITE = STS-119

	RESIDUALS				VDNA NOISE				RATING				
	MEAN	DEV	SD	RSS	PTS	PASSES	MIN	MAX	RMS	PASSES	TOTALPASSES	%USE	ANOMALY
ANGLE 1 (DEG)	0.002	-----	0.015	-----	52	1	0.0118	0.0118	0.0118	1	1	100.0	
ANGLE 2 (DEG)	-0.022	-----	0.039	-----	52	1	0.0195	0.0195	0.0195	1	1	96.2	
RANGE (M)	-0.080	-----	7.033	-----	52	1	4.3301	4.3301	4.3301	1	1	100.0	
RANGE-RATE (M/S)	-----	-----	-----	-----	0	0	-----	-----	-----	0	1	0.0	

COMBINED STATISTICS SUMMARY FOR KMRF

SATION = MIL3
 SATELLITE = STS-119

	RESIDUALS				VDNA NOISE				RATING				
	MEAN	DEV	SD	RSS	PTS	PASSES	MIN	MAX	RMS	PASSES	TOTALPASSES	%USE	ANOMALY
ANGLE 1 (DEG)	0.004	0.045	0.020	0.030	73	5	0.0058	0.0121	0.0097	5	5	93.2	
ANGLE 2 (DEG)	-0.015	0.047	0.014	0.031	81	5	0.0023	0.0071	0.0050	5	5	95.1	
RANGE (M)	-----	-----	-----	-----	0	0	-----	-----	-----	0	5	0.0	
RANGE-RATE (M/S)	-----	-----	-----	-----	0	0	-----	-----	-----	0	5	0.0	

COMBINED STATISTICS SUMMARY FOR MIL3

STATION = WL2F
 SATELLITE = ISS
 SATELLITE = STS-119

	RESIDUALS				VDNA NOISE						RATING		
	MEAN	DEV	SD	RSS	PTS	PASSES	MIN	MAX	RMS	PASSES	TOTALPASSES	%USE	ANOMALY
ANGLE 1 (DEG)	0.003	0.005	0.013	0.014	636	13	0.0053	0.0226	0.0113	13	13	100.0	
ANGLE 2 (DEG)	0.003	0.014	0.014	0.016	636	13	0.0043	0.0221	0.0116	13	13	100.0	
RANGE (M)	2.690	13.726	12.418	14.441	636	13	2.9716	16.5704	10.6322	13	13	100.0	
RANGE-RATE (M/S)	-----	-----	-----	-----	0	0	-----	-----	-----	0	13	0.0	

COMBINED STATISTICS SUMMARY FOR WL2F

STATION = WLPQ
 SATELLITE = ISS
 SATELLITE = STS-119

	RESIDUALS				VDNA NOISE						RATING		
	MEAN	DEV	SD	RSS	PTS	PASSES	MIN	MAX	RMS	PASSES	TOTALPASSES	%USE	ANOMALY
ANGLE 1 (DEG)	-0.001	0.003	0.004	0.004	446	10	0.0008	0.0031	0.0022	10	10	100.0	
ANGLE 2 (DEG)	0.008	0.008	0.003	0.010	449	10	0.0011	0.0031	0.0018	10	10	100.0	
RANGE (M)	-1.186	8.543	11.620	12.437	449	10	2.0693	13.9374	9.5105	10	10	99.6	
RANGE-RATE (M/S)	-----	-----	-----	-----	0	0	-----	-----	-----	0	10	0.0	

COMBINED STATISTICS SUMMARY FOR WLPQ

11. SN EVENT SUMMARY REPORT

The SN Event Summary Report provides a detailed summary of the tracking data quality of each SN tracking data event for STS. This report gives a chronological listing of all STS SN events summarized by Tracking Data Relay Satellite (TDRS) used for each event. The start and stop time, as well as other information pertaining to data quality such as the number of invalid, anomalous, and usable frames of tracking data, are listed for each event. Each event is rated as either a success or a failure. Comments are included for significant anomalous tracking data or for events having more than 30% invalid tracking data. This report also includes a statistical summary regarding the overall tracking data quality for all events for each TDRS used for STS support. This report is generated after the launch of STS.

```
TEAS  
TEAS  
TEAS  
TEAS TRACKING EVALUATION AUTOMATION SOFTWARE (TEAS)  
TEAS ALLIED SIGNAL TECHNICAL SERVICES CORPORATION  
TEAS TRACKING SUPPORT SERVICES (TSS)  
TEAS GODDARD SPACE FLIGHT CENTER  
TEAS BUILDING 28, ROOM N230  
TEAS GARY W. WILLIAMSON  
TEAS (301) 286-1323 PHONE  
TEAS  
TEAS  
TEAS  
TEAS TEAS TEAS TEAS TEAS TEAS TEAS TEAS TEAS TEAS TEAS TEAS  
1 #####  
# Daily Statistics Start: 20090316/223901 GMT #  
# Daily Statistics End: 20090317/224051 GMT #  
# Mission Statistics Start: 20090314/000000 GMT #  
# Mission Statistics End: 20090317/224051 GMT #  
# Report Generated on: 20090318/014905 GMT #  
# Report Generated by: Gary Williamson (301) 286-1323 #  
#####  
1 STS-119 TDRS- 3 EVENT TRACKING SUMMARY LOG  
REPORT GENERATION TIME: 20090318/014905 GMT  
  
S  
EVT ORBIT TDRS- 3 AOS LOS D E G D O P P L E R GSTDN MODE NOISE  
NUM NUMBER MMDD/HHMMSS HHMMSS C RET Q L PRED INV ANM USE DCE NL TOT DCE NL MIL USE  
PTS HZ % F COMMENTS  
2 1 0316/000345 003625 10 SSA1 A 3 197 90 2 105 192 65 0 0 0 11 53 F 46% invalid Doppler, no lock = 33%  
5 2 0316/015606 020746 10 SSA1 A 3 71 6 0 65 71 1 0 0 0 9 92  
8 3 0316/031024 033934 10 SSA1 A 3 170 4 0 166 170 1 0 0 0 9 98  
24 11 0316/143922 144902 10 SSA2 A 3 59 6 0 53 58 2 0 0 0 7 90
```

27	11,12	0316/155354	163034	10	SSA1	A	3	221	2	0	219	221	0	0	0	0	11	99	
34	15	0316/204852	210802	10	SSA1	A	3	116	45	18	53	113	20	0	0	0	6	46 F	39% invalid Doppler, no lock = 17%
38	16	0316/222239	224639	10	SSA1	A	3	145	13	18	114	143	6	0	0	0	8	79	
59	25,26	0317/123547	131507	10	SSA1	A	3	237	17	0	220	235	4	0	0	0	8	93	
62	27	0317/143808	144118	10	SSA1	A	3	20	3	0	17	19	1	0	0	0	7	85	
65	27,28	0317/154658	161518	10	SSA1	A	3	171	0	0	171	171	0	0	0	0	8	100	
68	29	0317/174429	175039	10	SSA1	A	3	38	2	0	36	38	1	0	0	0	5	95	
71	30	0317/192057	192757	10	SSA1	A	3	43	2	0	41	43	0	0	0	0	7	95	
75	31	0317/205714	210724	10	SSA1	A	3	62	4	2	56	61	1	0	0	0	7	90	
78	32	0317/222611	224051	10	SSA1	A	3	89	0	0	89	89	0	0	0	0	5	100	

1

STS-119 TDRS- 4 EVENT TRACKING SUMMARY LOG

REPORT GENERATION TIME: 20090318/014905 GMT

EVT NUM NUMBER	ORBIT	TDRS- 4	AOS	LOS	C	RET	Q	L	PRED	S			GSTDN			MODE			NOISE			COMMENTS
										D	E	G	INV	ANM	USE	DCE	NL	TOT	DCE	NL	MIL	
PTS	PTS	PTS	PTS	PTS	PTS	PTS	PTS	PTS	PTS	PTS	PTS	PTS	PTS	PTS	PTS	Hz	%	F				
1	1	0315/234355	001855	10	SSA2	B	1	211	52	0	159	202	36	0	0	0	25	75				
4	2	0316/012447	015507	10	SSA2	B	1	183	2	1	180	182	1	0	0	0	4	98				
7	3	0316/023957	030947	10	SSA2	B	1	180	3	0	177	180	1	0	0	0	8	98				
10	4	0316/043202	050632	10	SSA2	B	1	208	5	1	202	206	2	0	0	0	0	3	97			
14	6	0316/074135	081435	10	SSA2	B	1	199	25	17	157	197	9	0	0	0	4	79				
16	7	0316/091837	094857	10	SSA2	B	1	183	18	11	154	181	5	0	0	0	3	84				
18	8	0316/105602	112412	10	SSA2	B	1	170	6	2	162	169	1	0	0	0	3	95				
20	9	0316/123201	130121	10	SSA2	B	1	177	9	5	163	177	0	0	0	0	3	92				
23	10,11	0316/140556	143846	10	SSA2	B	1	198	5	0	193	197	1	0	0	0	5	97				
26	11	0316/154025	155315	10	SSA2	B	1	78	7	0	71	78	2	0	0	0	0	91				
29	12,13	0316/171401	174931	10	SSA2	B	1	214	10	8	196	213	4	0	0	0	5	92				
31	13,14	0316/183308	192318	10	SSA2	B	1	302	3	0	299	302	0	0	0	0	3	99				
33	14,15	0316/202003	204813	10	SSA2	B	1	170	3	0	167	169	1	0	0	0	3	98				
37	16	0316/220216	222206	10	SSA2	B	1	120	0	0	120	120	0	0	0	0	4	100				
41	17	0316/233940	000830	10	SSA2	B	1	174	6	0	168	173	3	0	0	0	5	97				
43	17,18	0317/005240	014600	10	SSA2	B	1	321	5	1	315	321	1	0	0	0	4	98				
45	19	0317/023019	032249	10	SSA2	B	1	316	7	5	304	316	0	0	0	0	4	96				
47	20	0317/040700	045810	10	SSA2	B	1	308	12	3	293	308	3	0	0	0	4	95				
49	21	0317/055800	063220	10	SSA2	B	1	207	4	0	203	206	2	0	0	0	2	98				
51	22	0317/071621	080621	10	SSA2	B	1	301	64	56	181	297	25	0	0	0	3	60 F	21% invalid Doppler, no lock = 8%			
54	23	0317/091001	094101	10	SSA2	B	1	187	25	10	152	186	3	0	0	0	3	81				
56	24	0317/104834	111004	10	SSA2	B	1	130	10	0	120	130	1	0	0	0	5	92				
58	25	0317/122428	123508	10	SSA2	B	1	65	2	0	63	65	0	0	0	0	7	97				
61	26	0317/135840	141000	10	SSA2	B	1	69	15	5	49	68	1	0	0	0	5	71				
64	27	0317/151549	154619	10	SSA2	B	1	184	4	0	180	184	1	0	0	0	4	98				
67	28,29	0317/170847	174357	10	SSA2	B	1	212	8	24	180	212	0	0	0	0	5	85				
70	29,30	0317/184630	192010	10	SSA2	B	1	203	47	22	134	201	22	0	0	0	4	66 F	23% invalid Doppler, no lock = 11%			
74	30,31	0317/200329	205639	10	SSA2	B	1	320	12	3	305	319	1	0	0	0	9	95				
77	32	0317/220550	222540	10	SSA2	B	1	120	2	0	118	120	1	0	0	0	3	98				

1

STS-119 TDRS- 5 EVENT TRACKING SUMMARY LOG

REPORT GENERATION TIME: 20090318/014905 GMT

EVT NUM NUMBER	ORBIT	S												COMMENTS						
		TDRS-	AOS	LOS	C	RET	Q	L	PRED	INV	ANM	USE	DCE	NL	TOT	DCE	NL	MIL	USE	
MMDD/HHMMSS	HHMMSS	I	SERV	P	T	PTS	PTS	PTS	PTS	PTS	PTS	PTS	PTS	PTS	PTS	PTS	HZ	%	F	
3 1,2	0316/003430	012410	10	SSA2	B	2	299	6	0	293	299	0	0	0	0	0	6	98		
6 2,3	0316/020828	023918	10	SSA2	B	2	186	27	19	140	183	7	0	0	0	0	7	75		
9 3,4	0316/034105	043015	10	SSA2	B	2	296	41	28	227	292	28	0	0	0	0	4	77		
11 4,5	0316/051450	060540	10	SSA2	B	2	306	18	8	280	305	5	0	0	0	0	3	92		
13 5,6	0316/064906	073616	10	SSA2	B	2	284	3	3	278	283	1	0	0	0	0	3	98		
15 6,7	0316/082442	091612	10	SSA2	B	2	310	2	0	308	310	0	0	0	0	0	5	99		
17 7,8	0316/100159	105529	10	SSA2	B	2	322	0	3	319	322	0	0	0	0	0	4	99		
19 9	0316/113921	123121	10	SSA2	B	2	313	4	2	307	313	1	0	0	0	0	4	98		
21 10	0316/131513	133823	10	SSA2	B	2	140	3	1	136	139	1	0	0	0	0	4	97		
25 11	0316/144936	153946	10	SSA2	B	2	302	31	12	259	298	15	0	0	0	0	0	86		
28 12	0316/163109	171329	10	SSA2	B	2	255	7	16	232	254	1	0	0	0	0	5	91		
30 13	0316/175731	183231	10	SSA2	B	2	211	12	24	175	208	4	0	0	0	0	5	83		
32 14	0316/193240	201930	10	SSA2	B	2	282	2	0	280	282	0	0	0	0	0	2	99		
35 15	0316/210930	213710	10	SSA2	B	2	167	3	2	162	167	0	0	0	0	0	3	97		
39 16	0316/224710	231450	10	SSA2	B	2	167	2	0	165	166	1	0	0	0	0	2	99		
42 17	0317/002333	005203	10	SSA2	B	2	172	3	2	167	172	0	0	0	0	0	2	97		
44 18,19	0317/015823	022943	10	SSA2	B	2	189	38	15	136	185	12	0	0	0	0	7	72		
46 19,20	0317/033221	040621	10	SSA2	B	2	205	27	5	173	203	14	0	0	0	0	4	84		
48 20,21	0317/050616	055726	10	SSA2	B	2	308	10	0	298	307	4	0	0	0	0	4	97		
50 21,22	0317/064051	071541	10	SSA2	B	2	210	2	0	208	210	0	0	0	0	0	4	99		
52 22,23	0317/082119	085329	10	SSA2	B	2	194	2	0	192	194	1	0	0	0	0	4	99		
55 24	0317/095639	104759	10	SSA2	B	2	309	5	1	303	309	0	0	0	0	0	3	98		
57 25	0317/113431	122341	10	SSA2	B	2	296	0	0	296	295	1	0	0	0	0	4	100		
60 26	0317/131539	135809	10	SSA2	B	2	256	7	1	248	254	3	0	0	0	0	4	97		
63 27	0317/144154	151514	10	SSA2	B	2	201	4	0	197	201	0	0	0	0	0	5	98		
66 28	0317/161551	170801	10	SSA2	B	2	314	22	4	288	311	5	0	0	0	0	7	92		
69 29	0317/175110	184540	10	SSA2	B	2	328	8	1	319	328	3	0	0	0	0	5	97		
72 30	0317/192829	200029	10	SSA2	B	2	193	3	0	190	193	0	0	0	0	0	3	98		
73 30	0317/200106	200256	10	SSA1	A	2	12	2	0	10	12	0	0	0	0	0	4	83		
76 31,32	0317/210820	220510	10	SSA2	B	2	342	105	17	220	335	41	0	0	0	0	8	64	F 31% invalid Doppler, no lock = 12%	

STS-119 TDRS- 6 EVENT TRACKING SUMMARY LOG
REPORT GENERATION TIME: 20090318/014905 GMT

1

EVT NUM NUMBER	ORBIT	S												COMMENTS					
		TDRS-	AOS	LOS	C	RET	Q	L	PRED	INV	ANM	USE	DCE	NL	TOT	DCE	NL	MIL	USE
MMDD/HHMMSS	HHMMSS	I	SERV	P	T	PTS	PTS	PTS	PTS	PTS	PTS	PTS	PTS	PTS	PTS	PTS	HZ	%	
22 10	0316/134331	140511	10	SSA1	A	1	131	1	2	128	131	0	0	0	0	0	3	98	
36 15,16	0316/213749	220139	10	SSA1	A	1	144	3	0	141	144	0	0	0	0	0	3	98	
40 16,17	0316/231523	233903	10	SSA1	A	1	143	7	1	135	141	4	0	0	0	0	3	94	

53 23 0317/085401 090921 10 SSA1 A 1 93 0 1 92 93 0 0 0 0 0 11 99
1 STS-119 TDRS-10 EVENT TRACKING SUMMARY LOG
REPORT GENERATION TIME: 20090318/014905 GMT

S																					
		D		E G		D O P P L E R						GSTDN MODE NOISE									
EVT	ORBIT	TDRS-10	AOS	LOS	C	RET	Q	L	PRED	INV	ANM	USE	DCE	NL	TOT	DCE	NL	MIL	USE		
NUM	NUMBER	MMDD/HHMMSS	HHMMSS	I	SERV	P T	P T S	PTS	PTS	PTS	PTS	PTS	PTS	PTS	PTS	PTS	PTS	HZ	%	F	COMMENTS
12	5	0316/060612	063922	10	SSA1	A 2	200	2	0	198	200	0	0	0	0	0	3	99			

STS-119 TDRS- 3 TRACKING DATA DAILY REPORT
REPORT GENERATION TIME: 0000000000 (21 APR 05) GMT

DAILY EVENTS: 59 TO 78 FROM 20090317/123547 TO 20090317/234951 GMT

DAILY EVENTS: 59 TO 78 FROM 20090317/123547 TO 20090317/224051 GMT
MISSION EVENTS: 2 TO 78 FROM 20090316/000345 TO 20090317/224051 GMT

	DAILY	MISSION
# OF EVENTS	7	14
# OF SUCCESSES	7	12
% SUCCESSES	100.0	85.7
# OF USABLE MINUTES	105.0	234.2
# OF ANOMALOUS MINUTES	0.3	6.7
# OF INVALID MINUTES	4.7	32.3
# OF TOTAL MINUTES	110.0	273.2
AV. USABLE MINUTES	15.0	16.7
AV. ANOMALOUS MINUTES	0.0	0.5
AV. INVALID MINUTES	0.7	2.3
AV. MINUTES PER EVENT	15.7	19.5
% USABLE	95.5	85.7
% ANOMALOUS	0.3	2.4
% INVALID	4.2	11.8

NO EVENTS WERE RATED AS FAILURES FOR TDRS- 3.

STS-119 TDRS- 4 TRACKING DATA DAILY REPORT

REPORT GENERATION TIME: 20090318/014905 GMT

DAILY EVENTS: 41 TO 77 FROM 20090316/233940 TO 20090317/222540 GMT

	DAILY	MISSION
# OF EVENTS	15	29
# OF SUCCESSES	13	27
% SUCCESSES	86.7	93.1
# OF USABLE MINUTES	460.8	860.8
# OF ANOMALOUS MINUTES	21.5	29.0
# OF INVALID MINUTES	37.2	61.8

# OF TOTAL MINUTES	519.5	951.7
AV. USABLE MINUTES	30.7	29.7
AV. ANOMALOUS MINUTES	1.4	1.0
AV. INVALID MINUTES	2.5	2.1
AV. MINUTES PER EVENT	34.6	32.8
% USABLE	88.7	90.5
% ANOMALOUS	4.1	3.0
% INVALID	7.2	6.5

THE FOLLOWING DAILY EVENTS WERE RATED AS FAILURES FOR TDRS- 4:

EVT YYYYMMDD/HHMMSS SERV	COMMENT
--------------------------	---------

51 20090317/071621 SSA2	21% invalid Doppler, no lock = 8%
70 20090317/184630 SSA2	23% invalid Doppler, no lock = 11%

1
STS-119 TDRS- 5 TRACKING DATA DAILY REPORT FOR DAY 2

REPORT GENERATION TIME: 20090318/014905 GMT

DAILY EVENTS: 39 TO 76 FROM 20090316/224710 TO 20090317/220510 GMT

MISSION EVENTS: 3 TO 76 FROM 20090316/003430 TO 20090317/220510 GMT

	DAILY	MISSION
# OF EVENTS	16	30
# OF SUCCESSES	15	29
% SUCCESSES	93.8	96.7
# OF USABLE MINUTES	568.3	1134.3
# OF ANOMALOUS MINUTES	7.7	27.3
# OF INVALID MINUTES	40.0	66.5
# OF TOTAL MINUTES	616.0	1228.2
AV. USABLE MINUTES	35.5	37.8
AV. ANOMALOUS MINUTES	0.5	0.9
AV. INVALID MINUTES	2.5	2.2
AV. MINUTES PER EVENT	38.5	40.9
% USABLE	92.3	92.4
% ANOMALOUS	1.2	2.2
% INVALID	6.5	5.4

THE FOLLOWING DAILY EVENTS WERE RATED AS FAILURES FOR TDRS- 5:

EVT YYYYMMDD/HHMMSS SERV	COMMENT
--------------------------	---------

76 20090317/210820 SSA2	31% invalid Doppler, no lock = 12%
-------------------------	------------------------------------

1
STS-119 TDRS- 6 TRACKING DATA DAILY REPORT FOR DAY 2

REPORT GENERATION TIME: 20090318/014905 GMT

DAILY EVENTS: 40 TO 53 FROM 20090316/231523 TO 20090317/090921 GMT

MISSION EVENTS: 22 TO 53 FROM 20090316/134331 TO 20090317/090921 GMT

	DAILY	MISSION
# OF EVENTS	2	4
# OF SUCCESSES	2	4
% SUCCESSES	100.0	100.0
# OF USABLE MINUTES	37.8	82.7
# OF ANOMALOUS MINUTES	0.3	0.7
# OF INVALID MINUTES	1.2	1.8
# OF TOTAL MINUTES	39.3	85.2
AV. USABLE MINUTES	18.9	20.7
AV. ANOMALOUS MINUTES	0.2	0.2
AV. INVALID MINUTES	0.6	0.5
AV. MINUTES PER EVENT	19.7	21.3
% USABLE	96.2	97.1
% ANOMALOUS	0.8	0.8
% INVALID	3.0	2.2

NO EVENTS WERE RATED AS FAILURES FOR TDRS- 6.

1

STS-119 TDRS-10 TRACKING DATA DAILY REPORT FOR DAY 2
 REPORT GENERATION TIME: 20090318/014905 GMT
 DAILY EVENTS: 0 TO 0 FROM 0/000000 TO 0/000000 GMT
 MISSION EVENTS: 12 TO 12 FROM 20090316/060612 TO 20090316/063922 GMT

	DAILY	MISSION
# OF EVENTS	0	1
# OF SUCCESSES	0	1
% SUCCESSES	0.0	100.0
# OF USABLE MINUTES	0.0	33.0
# OF ANOMALOUS MINUTES	0.0	0.0
# OF INVALID MINUTES	0.0	0.3
# OF TOTAL MINUTES	0.0	33.3
AV. USABLE MINUTES	0.0	33.0
AV. ANOMALOUS MINUTES	0.0	0.0
AV. INVALID MINUTES	0.0	0.3
AV. MINUTES PER EVENT	0.0	33.3
% USABLE	0.0	99.0
% ANOMALOUS	0.0	0.0
% INVALID	0.0	1.0

NO EVENTS WERE RATED AS FAILURES FOR TDRS-10.

1	59811	STS119dc000	20090315/232805	4	0315/234355	001855
2	59845	STS119dc001	20090315/234112	3	0316/000345	003625
3	59814	STS119dc001	20090315/234112	5	0316/003430	012410
4	59815	STS119dc001	20090315/234112	4	0316/012447	015507

5	59826	STS119dc002	20090316/104110	3	0316/015606	020746
6	59822	STS119dc002	20090316/104110	5	0316/020828	023918
7	59823	STS119dc002	20090316/104110	4	0316/023957	030947
8	59846	STS119dc003	20090316/110408	3	0316/031024	033934
9	59829	STS119dc003	20090316/110408	5	0316/034105	043015
10	59830	STS119dc003	20090316/110408	4	0316/043202	050632
11	59831	STS119dc003	20090316/110408	5	0316/051450	060540
12	59832	STS119dc003	20090316/110408	10	0316/060612	063922
13	59833	STS119dc004	20090316/110442	5	0316/064906	073616
14	59834	STS119dc004	20090316/110442	4	0316/074135	081435
15	59835	STS119dc005	20090316/110514	5	0316/082442	091612
16	59836	STS119dc005	20090316/110514	4	0316/091837	094857
17	59837	STS119dc006	20090316/110546	5	0316/100159	105529
18	59838	STS119dc006	20090316/110546	4	0316/105602	112412
19	59839	STS119dc007	20090316/110623	5	0316/113921	123121
20	59840	STS119dc007	20090316/110623	4	0316/123201	130121
21	59841	STS119dc007	20090316/110623	5	0316/131513	133823
22	59842	STS119dc007	20090316/110623	6	0316/134331	140511
23	59843	STS119dc007	20090316/110623	4	0316/140556	143846
24	59945	STS119dc008	20090316/175751	3	0316/143922	144902
25	59942	STS119dc008	20090316/175751	5	0316/144936	153946
26	59943	STS119dc008	20090316/175751	4	0316/154025	155315
27	59947	STS119dc008	20090316/174042	3	0316/155354	163034
28	59939	STS119dc008	20090316/174042	5	0316/163109	171329
29	59940	STS119dc008	20090316/174042	4	0316/171401	174931
30	59925	STS119dc009	20090316/152857	5	0316/175731	183231
31	59926	STS119dc009	20090316/152857	4	0316/183308	192318
32	59927	STS119dc010	20090316/170433	5	0316/193240	201930
33	59928	STS119dc010	20090316/170433	4	0316/202003	204813
34	59953	STS119dc011	20090316/184058	3	0316/204852	210802
35	59949	STS119dc011	20090316/184058	5	0316/210930	213710
36	59950	STS119dc011	20090316/184058	6	0316/213749	220139
37	59951	STS119dc011	20090316/184058	4	0316/220216	222206
38	60264	STS119dc012	20090316/202138	3	0316/222239	224639
39	60132	STS119dc012	20090316/202138	5	0316/224710	231450
40	60133	STS119dc012	20090316/202138	6	0316/231523	233903
41	60134	STS119dc012	20090316/202138	4	0316/233940	000830
42	60265	STS119dc013	20090316/215506	5	0317/002333	005203
43	60266	STS119dc013	20090316/215506	4	0317/005240	014600
44	60267	STS119dc014	20090316/232943	5	0317/015823	022943
45	60268	STS119dc014	20090316/232943	4	0317/023019	032249
46	60269	STS119dc015	20090317/010454	5	0317/033221	040621
47	60270	STS119dc015	20090317/010454	4	0317/040700	045810
48	60271	STS119dc016	20090317/023709	5	0317/050616	055726
49	60272	STS119dc016	20090317/023709	4	0317/055800	063220
50	60273	STS119dc017	20090317/041232	5	0317/064051	071541
51	60274	STS119dc017	20090317/041232	4	0317/071621	080621
52	60275	STS119dc018	20090317/054934	5	0317/082119	085329

53	60276	STS119dc018	20090317/054934	6	0317/085401	090921
54	60277	STS119dc018	20090317/054934	4	0317/091001	094101
55	60280	STS119dc019	20090317/072511	5	0317/095639	104759
56	60281	STS119dc019	20090317/072511	4	0317/104834	111004
57	60284	STS119dc020	20090317/090249	5	0317/113431	122341
58	60285	STS119dc020	20090317/090249	4	0317/122428	123508
59	60363	STS119dc021	20090317/104230	3	0317/123547	131507
60	60288	STS119dc021	20090317/104230	5	0317/131539	135809
61	60289	STS119dc021	20090317/104230	4	0317/135840	141000
62	60291	STS119dc022	20090317/121424	3	0317/143808	144118
63	60292	STS119dc022	20090317/121424	5	0317/144154	151514
64	60293	STS119dc022	20090317/121424	4	0317/151549	154619
65	60370	STS119dc023	20090317/185801	3	0317/154658	161518
66	60374	STS119dc023	20090317/190706	5	0317/161551	170801
67	60372	STS119dc023	20090317/190706	4	0317/170847	174357
68	60377	STS119dc024	20090317/192427	3	0317/174429	175039
69	60381	STS119dc024	20090317/193052	5	0317/175110	184540
70	60379	STS119dc024	20090317/193052	4	0317/184630	192010
71	60387	STS119dc025	20090317/194303	3	0317/192057	192757
72	60383	STS119dc025	20090317/194303	5	0317/192829	200029
73	60384	STS119dc025	20090317/194303	5	0317/200106	200256
74	60385	STS119dc025	20090317/194303	4	0317/200329	205639
75	60388	STS119dc026	20090317/184420	3	0317/205714	210724
76	60365	STS119dc026	20090317/184420	5	0317/210820	220510
77	60366	STS119dc026	20090317/184420	4	0317/220550	222540
78	60367	STS119dc026	20090317/184420	3	0317/222611	224051